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ABSTRACT

The articles in this publication focus on various concerns of college reading instructors. The topics of the twenty-four articles include (1) study strategies, (2) a fundamental skills initiative of the Navy, (3) special methods of teaching cursive handwriting to alleviate the writing problems of older beginners, (4) motivational techniques for the improvement of college reading scores, (5) holistic evaluation of international teaching assistants' oral English skills, (6) an experiential approach to evaluating tutors, (7) identification of problem readers in the regular classroom, (8) improving learning from texts through faculty and student development, (9) developing essay organization through helping students visualize the structure of the essay, (10) including vocational/technical students in the learning assistance center, (11) developing editing skills in ESL student writers, (12) using Bloom's taxonomy for precision planning and creative teaching in the developmental math class, (13) using a program model for structured, individualized composition instruction, (14) using peer paraprofessionals to diagnose and teach reading and study skills, and (15) teaching study skills to the whole person. (CRH)

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VOLUME XV

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PREFACE

This volume presents articles originally shared at the fifteenth annual conference of the Western College Reading Association held in San Diego, California. Of the thirty-six articles submitted, these twenty-four were selected by the editorial board for their freshness and clarity as well as their contribution to our fields of study. Our thanks go to those authors who took the time to submit their manuscripts.

This fifteenth volume contains, for the first time, a subject index of articles in all preceding volumes. Indexing is a special skill, tedious and time consuming, and we hope this index is clear and easy to use. Its availability should make our articles more accessible to researchers while providing a comprehensive overview of our organization to prospective members. Long time members might note with interest the growth and changes in WCRA.

Delryn Fleming

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FOCUSING ON OURSELVES AS PROFESSIONALS AND AS A PROFESSION

Hunter Boylan
President, NARDSPE

Few people in postsecondary education have as much direct individual contact with students as those who work in learning assistance centers. Few people are as eager for new knowledge as those who must use it to engage in innovation, those whose innovations will help weak students grow strong.

Some of the best models for individualized instruction, mastery learning, and competency-based education have grown out of their applications to basic skills students. Some of the most noted uses of the Perry scheme, Piagetian theory, and the reflective judgment model have resulted from attempts to promote reasoning and critical thinking skills among developmental students. Some of the most advanced applications of learning styles research are found in the diagnostic and placement activities of learning assistance programs.

There should be no doubt in anyone's mind that those of us who work in learning assistance and basic skills programs are committed to excellence. In fact, for many students, the very possibility of academic excellence begins with us. It is our job to help students develop their skills to the point at which they can meet standards of excellence.

We do our jobs without a great deal of fanfare. And we do them with a commitment to competence in our students and excellence in our work. But it is a job that takes its toll of our energy and our time. It is a job that leads frequently to frustration and burn-out.

Much of the frustration and burn-out, however, results from the fact that we don't focus on ourselves very often. We spend most of our time and energy meeting the needs of our students. We spend almost no time in meeting our own needs. If I had to list a single failure which is most characteristic of learning assistance personnel, it is that they do not put enough time into their own personal and professional growth or into the growth and development of their field.

That is what I would like to focus on in my comments today — you, your field, and some things that can be done to enhance both.

I suppose I should begin by making an admission. I am not really sure that what we currently do in this field qualifies as a profession. According to everyone's favorite reference source, *Webster's New Collegiate Dictionary*, a profession is a "calling requiring specialized knowledge and often long and intensive academic preparation." In addition, there are certain other items that tend to characterize a profession. Professions usually have one or more professional associations designed to promote the viewpoint of the profession and provide a forum for debate of issues and problems in the field. A profession usually has a body of research-based theoretical knowledge upon which to base its practice. A profession has a set of standards and ethics which its members are expected to uphold. Often, a profession has certain education and/or licensing requirements for its members. And although this particular characteristic is frequently abused, a profession looks after its own interests.

How do those of us who work in learning assistance and developmental programs measure up according to these criteria?

Does our work require specialized knowledge? Not really. Many of us are experts in areas of specialization such as reading, composition, counseling, etc. But we usually come to this particular field having left an area of specialization. The diversity of our students, their different styles of learning, their different rates of learning require us to be generalists even though we may have a content specialty.

Does our work require long or intensive academic preparation? Well ... yes and no. In order to hold our jobs, we are required to meet the prevailing standards of our academic institutions. Usually this means that we have to have at least a master's or a doctoral degree. But our work does not require us to have a degree in learning assistance or basic skills or developmental education. In fact, it would be difficult to obtain such degrees even if we wanted them. To my knowledge there are only three institutions in the country offering advanced degrees in learning assistance or developmental education. Of course, to a degree, all of us are re-treads. My own degrees are in history, counseling, and higher education. Many of you have trained as reading specialists, English professors, or administrators. At least we are in the ball park. But I have seen philosophy professors managing learning centers, basketball coaches running developmental education programs, and biology instructors running study skills labs. A few weeks ago, I even ran into a program director whose master's degree was in environmental horticulture. While we are usually pretty selective about the sorts of people we hire to staff our programs, most college administrators seem to believe that *anyone* can be hired to work with underprepared college students — particularly anyone who won't ask for much in the way of salary and fringe benefits.

Fortunately, we do have several professional associations. In fact, to my knowledge, the Western College Reading Association was the first professional group to focus on the problems of learning assistance and to provide a

forum for information and debate on critical issues in the field. NARDSPE is another such organization. There are also a variety of state and regional organizations, local chapters, and your own state and province organizations. As professionals, we score high marks in this area.

Do we have a body of research based on theoretical knowledge to guide our practice? I would say the answer to that is yes, but not enough. The works of Martha Maxwell, Pat Cross, and John Roueche form a solid nucleus of professional literature. We augment that with research from other fields such as counseling, psychology, learning theory, sociology, and adult development. Yet there are few sources of research based on the underprepared college student, and the number of practitioner/authors or pure researchers in our field is small.

And what about standards and ethics? As far as I know, there is only one comprehensive document describing the standards of preparation and practice and the ethics by which we should abide in this field. That is the standards and ethics statement being prepared by Commission XVI of the American College Personnel Association, and which has not yet been formally approved.

Do we have education and licensing requirements for our profession? Not to my knowledge. The work being done by the Kellogg Institute and its certification process represents a small step in the right direction. The Commission XVI statement on standards and ethics is another such step. The documents developed by WCRA over the years also form a potential basis for such licensing or education and certification procedures.

I am not a great advocate of the formal licensing and certification procedures that are frequently used as roadblocks to obtaining jobs, or as a sort of protectionist device for an elite few who got there first. I do believe, however, that some quality control measures for determining who is qualified to work in our field might be desirable — particularly if we ever get to the point where training opportunities are more numerous.

Does our profession look out for its own interests? As self-centered as that may sound, I consider it to be necessary at least some of the time. We are in one of those time periods now. Yet what have we done to protect ourselves from attack from the Reagan administration's "elitist offensive," from the folks who brought you catsup as a vegetable or tax breaks for Bob Jones University as a way of promoting social justice? Not very damned much, I'm afraid.

At any rate, it is both regrettable and safe to say that our field has not yet fully attained the status of a profession. It is regrettable because many of the problems we face on our own campuses relate directly to our lack of a professional image. We may conduct ourselves as professionals in our work, but we do so without a full-fledged profession with which we and others can identify. Our campus administrators are free to assume that anyone with a master's degree can teach underprepared students because there is no professional agreement on what the qualifications ought to be for teaching these

students. Those to whom we report are free to demand accountability in any terms they like because there are few professional definitions of what it is that we are supposed to accomplish. The rest of the academic community is free to misunderstand what we do because we have not defined ourselves as a profession, but as a collection of services. In short, our failure to grow and develop as professionals within a clearly-defined professional community has left us "targets of opportunity."

Fortunately, this situation need not remain fixed. We *can* and I think we are obligated to change it. I would like to suggest that there are several ways we can do this, all of which are well within our means.

One of the things that I am fond of saying as a consultant and as a speaker is that the cheapest form of innovation is a change in our own attitudes. The process of focussing on ourselves begins by recognizing that our work is legitimate — it is one of the truly important functions of the modern college or university. I believe that, too often, we are coerced into feeling guilty about having to be involved with remediation on a college campus. That is a ridiculous guilt trip. American postsecondary education has always been involved with remediation. Martha Maxwell, Gwyn Enright, and others have traced efforts to help underprepared students all the way back to the middle 1800's. What we have had to do in postsecondary education has remained relatively constant. Only the euphemisms have changed. We are part of a long standing tradition in American postsecondary education. Long before there were departments of psychology, there were programs designed to help underprepared students. Long before we gave degrees in business administration, we had basic skills courses for students who could not meet admissions standards. There is absolutely no reason for us to regard ourselves as second class citizens in academe. If others are so misguided or ignorant regarding the history of postsecondary education as to believe we have no legitimate role in the academic community, then let that serve as eloquent testimony to their own mindlessness, rather than a factor in our own self esteem.

Having recognized that we are legitimate and contributing members of the academic community, let us then strive to advance our contributions. Again, that process begins with our own attitudes. We need to believe that professional growth is a valuable and necessary objective and then act accordingly. Too often we subordinate our own needs for development to that of our students. We tell ourselves that we can't take time to read the current literature or engage in research or attend workshops because our students need us. We tend to be too busy putting out brushfires with garden hoses to focus on developing a better water supply.

Such beliefs not only stifle our development, but they are probably wrong. Right now, you have taken time off from serving students in order to be here. I can guarantee you that at least 95% of your students will still be there when you get back and probably won't have lost much ground while you were gone. Having come to San Diego for 3½ days of professional develop-

ment and professional renewal, you will probably find yourselves in a much better position and a much better frame of mind to serve your students than when you left. Yet that message seems to register only once a year.

The point here is that professional develoment is a continuing process; it is something that ought to take place all the time. We need to take more time to read.

A massive body of research and literature out there provides a foundation for what we do. Yet most of us are trained in a specific discipline. We know little about theories of cognition, or adult development, or learning styles. By virtue of what we do for a living, we are generalists. And that implies a responsibility not just to know a little about a lot, but to have a firm grasp of any knowledge that can help us do our jobs better. When we encounter terms such as cognitive processes, stages of intellectual development, or preferred modes of learning, we frequently think to ourselves that we know what these things are. And we probably do. But do we know enough about them to apply them to our own programs? It is not knowing *about* that will make us successful or justify our claims to professional status; it is knowing *what to do* with what we know.

We need not only to read the literature in our field, but we need to discuss it with our colleagues. We ought to devote far more time in staff meetings to discussing critical issues in the field and how they affect our programs. We need to use the literature to bring about a better understanding of what we do and why it works.

I would strongly recommend to all of you that, at least once a month, you should close up shop for half a day and spend some time on yourselves as a staff of people working in a common cause. I would encourage you to use that time to make short and long range plans for your program's development and to decide what you need to learn in order to make those plans work. I would recommend that you share with each other your creative solutions, your disappointments, successes, and hopes for the future. If we spend day in and day out, month after month, without doing these things, we burn out easily.

We also have a responsibility to create new literature. Practitioners in this field have to begin describing what they do, articulating their reasons for a choice of methods or treatments, evaluating the outcomes of what they do, and reporting the results. This will help us develop the body of research and literature that characterizes a profession. It will not only contribute to the growth and development of our profession, but it will also contribute to our own growth as professionals.

What I have described so far are informal channels of professional development that you can easily apply within your own programs. There are also more formal channels for professional development.

Attendance at professional conferences, for instance, is one of the things you ought to do for yourselves. A conference is one of the primary sources of new knowledge and applications. Conferences provide one of the best ways of discovering what is going on in your field through a single, concentrated

effort spanning only a few days. Conferences are also one of the best ways to expand your professional network. I'm sure that one of your past WCRA presidents, Frank Christ, will be happy to tell you about the importance of networking. He was the fellow who finally convinced me that "networking" is, indeed, a verb.

The contacts that you make at conferences and the friends that you meet help you to feel good about what you are doing and to feel less lonely in your roles. It's tough to be one of only a handful of people on your campus who are concerned with the underprepared student. The people you meet and the friends that you make will also become resources for your own development as you learn from them what's happening on other campuses, as you learn how other people solve the same problems you face, as you begin to realize from new sources that success happens more often than failure in our business.

Also bear in mind that your conferencing does not have to be done at the big national meetings. As travel funds diminish, it will become increasingly important for you to develop local associations. The essence of conferencing — contact with your fellow professionals in a field of mutual interest — can be had just as easily at a Southern California regional gathering as it can at the American Association for Higher Education or the International Reading Association.

Courses at local colleges and universities are also another source for professional development. While there are few degree programs in our field, there are lots of courses applicable to what we do in the areas of education, psychology, sociology, and management. Most of us are entitled to take a course every now and then as part of our fringe benefit package. We would be wise to take advantage of this particular fringe benefit in order to enhance our professional development.

There are also a growing number of specialized training programs in our field. Right here in California, Martha Maxwell's Institute at Berkeley provides an excellent training experience for learning center personnel. The Kellogg Institute in North Carolina offers intensive training as well as graduate credit in developmental instruction, counseling, evaluation, and management. For the foreseeable future, I think that these sorts of programs will probably be the leading source of specialized training outside of conferences and graduate programs. Your support of these activities through your attendance and your recognition of their importance to the profession is a necessary component of their success. As such programs grow and develop, the opportunity for participation in formalized training experiences will expand. And, as this happens, our field will have taken another step towards professionalization. It will be in a better position to set standards for professional participation and encourage its members to meet these standards. It will be in a position to demand that those who work with the underprepared student be prepared to do so themselves.

There is another area where some focussing on ourselves is required as

individuals and as professionals. To function effectively in this area, we again need to change our own attitudes. That area is politics.

There are some government spokesmen who suggest that postsecondary education is simply having to bite the bullet because of past failures. It is actually the poor, the undereducated, and the disadvantaged who are having to bite the bullet — primarily because the government has failed them. It has given up its commitment to equality and social justice and advancement through higher education.

The evidence is becoming increasingly clear that those of us who work in colleges and universities, particularly those of us who work with underprepared students, are targeted to become casualties of this administration's war on equality. The students that we serve are often the ones who have to rely on federal aid in order to attend college. Substantial portions of our program activities are funded through federal higher education programs that have been cut back. Many of the agencies that have provided seed money for innovation in our field — such as FIPSE and NIE — have suffered major funding cuts.

Fortunately, I am not describing events that are beyond our control. I am, however, describing events that we have let get out of control. Nevertheless, we do not have to let the trends continue.

We can reverse them. There are close to 3,000 learning centers in the United States and almost 10,000 professionals who are working directly or indirectly with those centers. We have two major professional associations and a host of regional associations to represent us, not to mention professional associations in other areas of education whose aims coincide with ours. These represent not only a great many individual votes, but a considerable amount of power and influence in the public sector.

There is a groundswell of public and political opinion growing to counter the administration's educational policy. If we were to add our weight to the strong opposition that is already developing, there is no question as to the outcome. Word has already gone out that the president is willing to compromise on certain aspects of his budget for 1983. His advisors are listening carefully to see who and in what numbers they will demand compromises. And what it will cost not to compromise. We need to tell political figures at all levels of government that the cost of sacrificing higher education will be heavy. We need to tell them that they will be held accountable at the polls by a powerful, educated, and informed group of professionals.

We are a powerful, and an educated, and an informed group who are on the verge of becoming a strong profession. And all we need is the will and the energy to do it. The beliefs at the foundation of our field require our students to take actions and invest the time and energy necessary to their own success. We should expect no less of ourselves.

Frankly, I don't have very many doubts that, if we accept the challenge, we will win. We are *just* beginning to emerge as professionals. We've been doing our work in learning assistance programs for only a decade and a half,

and we have much to show for our efforts. The indications that we are a strong and growing profession are clearly visible. In spite of travel restrictions, more people are attending conferences in our field this year than ever before. There has been more literature produced in our field during the last three years than there was during the previous ten years. Learning centers have *grown* in number this year, not declined. We are serving more students with more and better services than ever before. We are just *beginning* to realize our strength.

For most of our history, we have focused our energies on helping students. We must continue to do so, but we must also focus those energies on our professional growth, both individually and collectively. It is time for us to begin thinking of ourselves as professionals, to master what we already know about our profession, to translate that mastery into action through professional development, to rally behind and support our professional associations, and to exercise our professional responsibility in making government more responsive to us and to our students.

In short, it is time to focus on ourselves.

PERSONAL REVITALIZATION

Emmett Casey
San Diego Community College District

"Revitalization" means an enthusiastic appreciation for the fact that I'm alive, I've had some good experiences and I'm looking forward to more. It means that I know the difference between existential or asset values (things that should be appreciated in and of themselves) and comparative values ("that's not too bad for a 40 year old"). Some people think of revitalization as the counterpoint to burnout. It may be, but need not be; I can revitalize myself whether I'm burned out or not.

In my estimation, one of the best ways to become revitalized is to conduct a self-assessment to see where I am and then compare that to where I want to be. If there is a gap, then I must make a decision to do something about it and devise a plan of action.

A questionnaire is a good way to look at oneself in a rather systematic way and reach some global conclusions, e.g., "do you find yourself frequently upset or irritable?" "Are you performing your job carelessly or mechanically?" These questions relate to burnout, but at the same time they also focus attention on negative types of behavior. The negative feelings about work, personal relationships, and general activities tend to make a person feel drained physically, mentally, emotionally and spiritually.

Among the candidates for "burnout" are men and women in all walks of life. However, women are at greater risk for burnout than men, according to Roselind Forbes[1], a psychologist recognized for her work on stress management. Among women, homemakers are at greatest risk. Those at least risk are self-employed people who own and run their own business. Some telltale signs of burnout are boredom, futility, loss of control, exhaustion, frustration, loss of motivation, anger, depression, lack of feeling, and the inability to make decisions. The net effect of prolonged negative emotional stress is probably a major cause of burnout. However, a revitalization approach emphasizes positive aspects of one's existence rather than negative aspects.

Dr. Ken Pellitier's book, *Mind as Healer – Mind as Slayer*[5], reported that our environment is disease-oriented, which is a negative concept. In a sense, it is the absence of health.

It is estimated that 50%-80% of all health problems — cardiovascular, cancer, arthritis, respiratory or diet — are related to psycho-social stress. In the United States, there are 20-25 million people with hypertension or high blood pressure. Thirty million people have sleep-onset insomnia, they cannot or do not sleep well. Other indicators of stress-related problems are alcoholism, migraine headaches, asthma, hayfever and ulcers.

One of the main purposes for having a conference like this is to provide an opportunity for revitalization, rejuvenation, becoming younger in mind and heart at least, if not in body. We also have the opportunity to do a little soul searching and reflecting on who and what we are, and where we are going and why. We can do this at several levels: physically, psychologically, and philosophically.

An individual has to be considered as a whole, physically, psychologically and spiritually with a view to gaining as much understanding as possible about his relationship with his total environment. This environment includes, but is not limited to, family and friends, acquaintances, job situation, living situation, self-concept and role in society as well as early childhood development and religion. This is sometimes viewed as the humanistic approach or holistic approach to understanding human behavior or health.

Physically, is there a gap between what I am and what I want to be? If the answer is "yes," then what can I do about it? Let me look at the physical aspect of me — my health, weight for example. How important is that to me? What about my nutritional and exercise habits? Is there an excess or balance in my work and play? What about smoking? The answers to these questions will vary for each of us. Balance is the key word here. Do I have a good balance in my life physically, intellectually and spiritually? (I am not using this term necessarily in a religious sense). We need a balance not only between three dimensions, but a balance within each of the three. For example, in the physical domain we need a balance in exercise, eating and sleeping — getting enough, but not too much.

What has sleep to do with revitalization? It is reported that 65% of adults have problems with sleep. Dr. James Paupst[4], a noted sleep researcher, has recently published *The Sleep Book*. In it, he reports one reason for writing his book was to counteract the fact that most doctors know little about sleep, so they blithely write millions of prescriptions for drugs which are not only detrimental to our sleep but to our health as well. He also hits the over-the-counter drug industry for misleading advertising regarding dangerous sedatives. According to Paupst, "Many people over 50 require only a fraction of the sleep needed by persons in their 20's and 30's; sex can be a positive factor in getting a good night's sleep, prayer can be too; body position is of paramount importance to sound sleep; careful napping can add 20% to your useful waking hours." The average person spends 22 years of his life, roughly

a third, in bed, possibly sleeping.

Psychologically, the early philosophers had a variety of ways of dealing with the world of ideas that would lead men to happiness or the ultimate good. The Epicureans thought for example that (1) the ultimate good was an imperturbable emotional calm, internal peace, (2) that intellectual pleasures were superior to all others, and (3) that momentary pleasures should be renounced for more permanent ones. All of this was to be brought about through sensitive and cultivated tastes; too much of anything was bad. We can consult our own experience to see how much we agree with this point of view.

The Stoics, however, minimize the number and intensity of needs, wants and desires. The Stoic prided himself in not showing passion nor pain. The fewer his needs, the happier he was. This contrasts sharply with Hedonism, which dictates that pleasure is the supreme and ultimate good. The more pleasure, the better, and all that one does should be done in pursuit of it.

Aristotle asked the question, "What is happiness?"[2] He spent several books in his Nicomachean Ethics suggesting what it might be — money, health, power — and in the end, concluded that one of the greatest components of happiness was the sharing of ideas and experiences with friends and loved ones. In a sense, it is communication in both an intellectual and emotional level with a chosen one or select few. Today, that might be called a dialogue, discussion, or intimate conversation. It is at least the confirmation that I am an important person, not only to myself, but to others as well. How am I communicating or not communicating? What am I saying non-verbally as well as verbally? Most of us think we know what we are saying verbally.

One of the most fascinating discoveries in modern times, in my opinion, is the study of non-verbal communication. It has become both a science and an art. Our bodies are communicating in ways which we cannot really control nor are we aware of what it is we are saying. Touch is one example. We have a need to touch and be touched — it is a way of expressing all kinds of things. Research indicates the average person needs between 8–11 touches or hugs each day. That is our TQ, or "touch quotient." Sometimes those most in need of touch become touch-desperate and send off messages, "don't touch me." Look at our society, at older people, especially older men, who are alone and sometimes desperate. Are they allowed to communicate via touch as readily as young people? Why not? How is our touch quotient, both touching and being touched?

Our voice signals several shades of meaning to the same word. A simple "yes" or "no" can convey "possibly," "probably," "not on your life," etc., while our facial cues might be signaling other messages — a raised eyebrow, a curled lip. The eyes are said to be the windows of our souls, perhaps our emotional souls. Whether our eyes are windows or not, we communicate non-verbally — "seeing eye to eye," an "icy stare," "wide-eyed," "starry-eyed," "bedroom eyes" all convey various meanings. The major point that I'm trying to develop here is that our vitality is expressed in non-verbal com-

munication to others, who in turn share in it. Their response and shining eyes will help us feel more vital than before.

Another aspect of our non-verbal communication is the way we dress and groom. We are communicating to others something about ourselves — it may be attitudes of success and accomplishment, or of casualness and being laid-back. If we want to be the best we can be, we must take stock of how we are communicating with our attire. It may be time for change in our wardrobe for non-verbal self-renewal.

Philosophically, personal renewal or revitalization emphasizes the positive and encourages us to do well whatever we are doing. We have to discover and unfold the meaning of our life. We ourselves make it meaningful, but others can help make the process meaningful for us. Living our lives in such a way that we are reponsible toward ourselves (self actualizing) and toward others is the meaningful life. If I know *why* I'm living, *how* I'm living is tolerable. The "why" can support many different "how's."

Our life has enhanced meaning when we are growing and progressing toward the achievement of values. There are three main areas of these values: creative, experiential, and attitudinal.

Creative values are realized when we work for the benefit of society through art, music, or literature. Our creative values are expressed through teaching, reading, gardening, woodworking or painting. Doing a good job in whatever area we are involved is an expression of creative values. If we approach our daily jobs as a way of expressing our creative values, we may discover an exciting dimension in existence. We can expand this concept. We can give ourselves to others, friends, relatives and neighbors, and in enriching the community around us through responsible achievement we find one of life's real meanings.

Experiential value is the act of simply experiencing and appreciating such things as friendship, love, joy, curiosity, knowledge, nature — seeing the Good, the True, and the Beautiful. Discovering the interesting and exciting in life leads to renewal and depth of meaning. We do this by going to places where things are happening and participating; athletic events, concerts, movies and plays. Talking with and really getting to know other human beings can be a remarkable experience if real communication occurs.

Attitudinal values have to do with facing life with right attitudes. For example, if we can avoid suffering, we should; however, if we are faced with unavoidable suffering, the manner in which we deal with that can enrich our lives. Look at the men and women who have overcome obstacles or handicaps and suffering; we admire them, they are our heroes.

One aspect of communication that is especially valuable is in the domain of humor. In our current milieu of economic gloom and the fear of global conflict, one resource that never fails to put things into better focus is a sense of humor. Look at the people we respect and admire. Some of those most respected and admired are those who display a sense of humor. Johnny Carson makes people laugh for fun and profit. Bob Hope is the idol of millions.

Canteflas of Mexico, Bill Cosby — all see the incongruous in human nature, report it, and people respond with laughter and feel better. If it is human to make mistakes, it is even more human to be able to laugh about them, to laugh at ourselves when we goof or feel sorry for ourselves.

Communication is so important to being vital; it is both the head and the heart of our existence. Revitalization would be next to impossible without it.

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SQ3R: REWORKING AN OLD TECHNIQUE FOR BRAIN COMPATIBILITY

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> As things now stand, the typical graduate of most major universities knows next to nothing about the workings of his own brain. This is particularly ludicrous when you consider that all mental life is directly dependent on the integrity and optional functioning of the brain. How absurd that a person, in order to understand the world, should study history, sociology, even psychology, yet possess no information at all about the regulator of *all* human activities.[13:383]

Background — the problem

The SQ3R study method has its origins in the 1920's, according to Francis Robinson[8] who did a limited sample study on its effectiveness at Ohio State University. From the earliest work of educational psychologist Edmund B. Huey in the 1880's until 1924, Robinson found that no emphasis had been placed on study reading strategies. Perhaps this finding should not be as surprising as it may seem because widely expanding curricula, an increasing emphasis on technology, and a broader cross section of the U.S. population attending colleges are phenomena of the post World War I era. The increased reading demands placed upon the post-war college students apparently began to outstrip the students' overall ability to comprehend.

Since Robinson's book[14] several authors have proposed variations of SQ3R; in 1963 Spache offered PQRST, Walter Pauk proposed OK4R in 1962[8], and in 1975 Bergman devised T-SQUARE.[10]

In essence all the methods encourage students to develop a strategy for reading large amounts of technical and unfamiliar materials. This strategy should involve

1. Previewing in some form or another
2. Personal association with the material to be studied
3. Careful reading
4. Reinforcement

With the dramatic growth of college effective study programs in the last twenty years, a product of more flexible admissions programs and a purported sagging literacy rate, textbook reading techniques have become popular, and consequently subject to close scrutiny if not debate among researchers.

Given the thought, the time, and the effort that has gone into the development and practical applications of SQ3R (and other methods), we now must face a disturbing reality: in its present form, SQ3R does not work for the average student.

Even though theoretically SQ3R appears as if it should work, researchers[2,9,10,15,16,21] indicate that several problems exist which prevent it from being an effective practical study tool:

1. Even though students know how to use the technique, they do not apply it.[2,15,16,19]
2. Students who do apply the method find it artificial, too involved, and so time consuming that the effective study strategy actually interfered with comprehension.[10]
3. Many students might have more success with the technique if they *believed* it would work.[19]

Some positive findings have emerged on the efficacy of study improvement programs. Most emphasize reading, which makes sense because approximately eighty-five percent of all college learning is related to the reading process.[3] In a study done by Usova[22] the application of a reading/study skills course for lower ability college students positively affected both student grade point average and retention. In Tillman's annotated review of studies on the relationship between reading improvement programs and grades from 1945 to 1971, the author found the ratio to be three to one in favor of statistically significant positive results.[20]

At best, conclusive proof that SQ3R or other effective study strategies actually benefit the student is a researcher's chimera. Johns and McNamara[8] claim that more research needs to be done to prove whether or not SQ3R is a superior study technique. To assume that such a study is even possible, given the seemingly astronomical number of possible variables in such an experiment, may be hoping for too much. A recent study by Tryon and Sy[21] indicates that study skills *alone* apparently do not improve academic performance; psychological factors must be taken into account. Katz and Wright found that the beneficial effects of improved study strategies seemed to fade in one semester. They conclude:

> Perhaps this course operates like a drug which must be administered regularly to correct a chronic deficiency. If in sufficient dosage, it would effect a "cure"; then one might conclude that giving one semester of a skills course is sufficient to make them temporarily better, but not cured.[9:94]

The uneven and sometimes confusing results of the research into SQ3R is perplexing. However, since reading-study strategies were proposed, much has been discovered about the workings of the human brain. Based on the comparatively recent findings on brain function, SQ3R is a *theoretically* sound technique; but unless we can package it so that students will use it, SQ3R will remain a schoolroom exercise which has little to no effect on the at-home reading behavior of students.

A possible solution to the problematic gap between reading-study theory and its useful application lies in combining SQ3R with findings in brain research on memory, and with the time-spaced learning theory. The brain theory demonstrates to the student how SQ3R can be made organically compatible with how the brain functions, making the textbook strategy a more personally meaningful activity rather than an externally imposed formula.

SQ3R vs. the brain

Until now we have had the cart before the horse: the brain, with all of its built-in strengths and limitations must control SQ3R, not the other way around. In terms of Proster (program structure) Theory[6] we need to shift from the more artificial, contrived SSM (symbol selection and manipulation) mode to the more brain oriented PAC (perception, analysis and choice) mode. In other words, in place of an *externally* applied system, we have to show the student how to internalize the whole process of SQ3R and make study reading strategies not just a seemingly good idea learned in a school setting, but a logical, easy to assimilate, ingrained habit — or program, to use computer terminology.

In order for Proster Theory to work, there are several key requirements according to Leslie Hart[6]:

1. Freedom from threat — the student *must* perceive the textbook as a tool over which s/he has control.
2. Reality principle — learning from the textbook needs to be as unartificial as possible: the "steps" of need not be disjointed activities. They should be integrated into a single, easy to remember process.
3. Communications emphasis — the student needs to stress an ongoing "dialogue" with the text.
4. Manipulation emphasis — passive reception of ideas is next to no reception at all. The student must *do* mentally, *do* physically, and *do* emotionally if learning is to be effective and efficient.
5. Addressing for use — what is the study activity going to be used for? Why do it at all?
6. High input for pattern learning — how do the pieces of the learning puzzle fit together to form a coherent "whole"? Disparate chunks of data are soon forgotten.

This last item is particularly important. According to Smith,[17:71] "there is evidence that organization and memorization are in fact the same process." Memory itself — both short term (STM) and long term (LTM) is integrally connected to comprehension, which is the principal aim of any study reading strategy.

But how does memory work? The answer is at once simple and frustratingly complex: we do not know. However, a recent theory compares memory to holographic photography:

> An ordinary photograph, when cut in half or scissored into multiple sections, can be reconstructed only by placing the pieces in opposition to each other in accordance with their position in the original photograph. In holography, since the information is uniformly stored through the hologram, the original image can be reconstructed at any time.[13:226]

The human memory is apparently an incredibly efficient, cross-referential network, capable of storing billions of pieces of information for years. If students can learn to manipulate the selfsame learning methods to the textbook reading situation, their efficiency as learners will increase dramatically. This obviously is easier said than done; nevertheless, it can be done under the proper conditions.

The human brain has a few basic and reasonable demands often overlooked in the school setting.

1. All new material has to be constructed upon material previously learned. Smith[17:18] calls this "basic background," an essential ingredient to reading comprehension.
2. Sudden insights occur when there is a joining between two or more programs which were not previously connected. Hart[6] suggests that this phenomenon may be explained by neurons in the brain "firing" in a new or different sequence.
3. Search. The Biblical "seek and ye shall find" is very close to the mark here. Apparently unless the brain actively is looking for something (information, a new stimulus, a solution to a problem), is both attentive to the task and not under threat or duress, the individual loses concentration and the mind "wanders," probably to topics more interesting, meaningful, and stimulating.
4. The brain knows its limits, and it *refuses* to be overloaded with input. According to researchers[17,19,24] shifting information from the short term memory — itself restricted — into the long term memory cannot be done faster than one item every four or five seconds. According to Smith,

> The capacity of short-term memory is restricted to about a half dozen items and if this capacity is exceeded information from short-term memory must either go into long-term memory or be permanently

lost. *But only one item can get from short-term to long-term memory every five seconds.*[17:70]

Because of the limitations of the brain itself, and because of students' unwillingness or perhaps inability to use SQ3R as a study reading strategy, does this mean that we need to scrap the technique? Absolutely not.

SQ3R modified

There have been several variations on SQ3R over the years, one being SQ4R (the fourth R represents *repeat*. If students are not likely to do the complex process in the first place, this step is little more than a frustrating tautology). The basic premise here is that the system of reading proposed by the SQ3R method is essentially sound; the modifications need only be superficial. It is not the basic theory that needs to be changed, only its presentation to students. Instead of a *five* step process, SQ3R can be presented as a *two* step operation.

Step one: survey, question. The first step is really a cursory overview of the chapter. The entire process should be treated much like skimming in which the student reads quickly, perhaps setting a ten to fifteen minute limit for the entire process. The act of previewing satisfies what Smith[18] calls the "need for prediction." If a student is going to comprehend, s/he has to know what is coming. The survey can also diminish the level of anxiety or threat if the student encounters at least *some* familiar material as s/he begins to apply a known pattern of reading to an unknown set of data.

Only two formulaic questions are necessary for the student to ask:

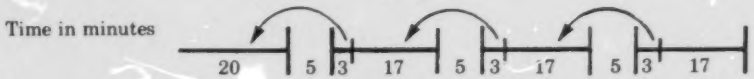
1. How long will this chapter take me to read? The student can then budget time accordingly.
2. What's in this for me? *Purpose* in reading is one of the cornerstones of comprehension. Unless the student can concretely answer this question, s/he is simply wasting time by going any further.

The remainder of the questioning concerning the content of the chapter will be automatic. Turning subheadings into questions is silly busy work. Tadlock[19:111] says "self-generated questions are more appropriate and more valuable in guiding the reading process than are teacher generated ones." Or book generated ones for that matter. As anyone looks through unfamiliar material, the brain is being stimulated with new sensory input, and will automatically seek patterns and connections.

Step two: read, recite. "A creature that sits still and does nothing cannot learn anything. Put the other way around, this reminds us once again that whatever the memory is, it is certainly a part of an action system."[24:81] Loftus[11] also corroborates the necessity for movement and learning, and cites the example of the highly efficient persistence of motor skill memories like riding a bicycle.

There is a technique called Time-Spaced (distributed practice) Learning which fits well with reading/recitation, and it integrates the process of reading and monitoring comprehension stressed by Paris and Myers[12] and Whimbey[23]. Time Spaced Learning also minimizes short-term and long-term memory overload which Loftus[11], and Smith[18], caution against. The technique is relatively simple and serves to keep the student on-task, and by keeping up the level of new stimuli it discourages daydreaming.

When the student sits down to study s/he decides the length of each session, depending on the difficulty or unfamiliarity of the material. Using a clock, the student then studies for, say, twenty minute intervals, spaced by five minute breaks in which s/he gets up, moves around (gets a glass of water, makes a cup of tea, or some other preferably ritualistic task) and then returns to the textbooks, reserving the first three minutes or so of the next session for a "mini-review" or recitation of what s/he has just studied. Schematically the process might look like this:



During the recitation period the student may choose to do some form of note taking, either in the text or on a separate sheet, using a systematic technique such as Information Mapping[7], or serial ordering[23]. Good note taking is apparently one of the most efficient learning systems the student can use[1,4], and it helps to keep the student actively involved in the reading act. The main point the student must keep in mind is that s/he must use the timing and note system flexibly, altering it to suit the needs of the situation.

Step one (again): review. Reviewing is in essence re-skimming the material. The process is the same, only the purpose is different. In previewing the student is generally questioning and exploring the ideas for the first time, while reviewing functions as an inventory and reinforcement of what has been learned. What is crucial is that the student wait twenty-four but no more than forty-eight hours before reviewing. Whether one follow Hermann Ebbinghaus' results of an 1885 study in which he discovered that the percent of material retained declined sharply in the first forty-eight hours and then leveled off, or whether one accepts the more current biochemical "Kamin effect"[6:158], a period of a few hours is necessary for information to "jell." The student can then assess what data s/he locked in to the long term memory, and what needs to be reintroduced, using his/her reading notes as a guideline, perhaps modifying the notes as necessary.

Conclusion

What cannot be emphasized enough in using the SQ3R or any other study strategy is the need for personalizing and individualizing the activity.

Study reading formulas alone are not enough. As Alan Lazarus stresses:

> ...students need to develop their own strategies as there is no guarantee of automatic transfer between specific "prescriptions" and mastery. Students may start by learning about certain procedures, but they should be encouraged to adapt and extend them for their own purposes and learning styles.[10:44]

SQ3R can be a useful theoretical base upon which to build a flexible study reading technique, but it is up to the instructor to present it in such a way that the students can plainly see that it is a relatively easy-to-adapt method that produces an immediate payoff: smoother, more systematic study-reading that cooperates with the brain rather than making impossible rigid demands upon it.

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STUDY STRATEGIES: TOO MANY, TOO FEW...OR JUST RIGHT?

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It is now more than forty years since Francis P. Robinson[18] first suggested a strategy to help students in their study-reading assignments. In the intervening years, many modifications of the SQ3R strategy have been offered in an attempt to address the need of how best to work with students. Much of what has been suggested for students has been "preachments based apparently on opinion rather than on research," according to a review of journal articles on study skills over a ten year period.[2] Before dealing with the SQ3R strategy itself, it would be well to consider how students see their own preferences for study techniques as these preferences have been reported in the professional literature.

In a comparison of four techniques, Stordahl and Christensen[21] found that reading and underlining, reading and outlining, reading and summarizing, and reading only were equally effective as measured by comprehension of the material both immediately after studying and one week later. In another study, college freshmen (to a greater extent than sophomores) reported that they reread several times, miss important lecture points, waste time or wait for the right mood before studying, and need a place to smoke when studying. For sophomores, enjoyment of conversations and the like was reported to interfere with studying more than for freshmen.[25] This latter point will be considered later in this paper in a study related to the SQ3R strategy.

A more recent report indicates a developmental process as students move through their school years. The data are presented in Table 1. The data suggest again that reading and underlining is the most common way in which students complete their study-reading tasks. The professional literature on study techniques, however, offers many other ideas for students to consider in their study-reading.

TABLE 1

Students' Reported Preferred Study Techniques[1]

	Gr. 6-8 N=286	Gr. 10-12 N=329	College N=299
Read only	60%	47%	13%
Read & notes	23%	17%	17%
Read & underline	10%	18%	39%
Read, underline, & notes		8%	18%
Read, underline, or notes			6%

Research on the SQ3R strategy

In urging the use of his study system, Robinson indicated that there was research to support the practice of previewing, questioning, outlining, and recitation, but the did not cite any specific references.[19] It is necessary, then, to look at what has actually been reported to determine if, in fact, there is a research base for the study strategies we so often suggest to students.

TABLE 2

Research on the SQ3R Strategy

Year/Researcher N/Group	Conclusions	Comments
1953/G.F. Wooster/ 29 College	No increase in rate or comprehension. After 10 weeks, only 65% continued using SQ3R; only 55% still used questions; students still took notes as they read.	No control group. Students are not prepared to learn integrated techniques like SQ3R.
1962/L. Fox/ College	In the following quarter, the smallest gain was one letter grade. All Ss continued using the process.	12 weeks training; Ss allowed to go and talk when they felt uncomfortable. This legal excuse made talking less attractive as an escape measure. Ss literally sat on their books for the Recitation step.

Year/Researcher N/Group	Conclusions	Comments
1966/D.J. Willmore/ 80 College	Ss who underlined got higher scores than the reading, outlining, and SQ3R groups.	Ss favored underlining and then reading as preferred techniques.
1967/Sr. M. Donald/ 31 Gr. 7	Ss benefited from instruction; better powers of organization, association, and critical thinking; general reading ability did not improve.	Problems with methodology.
1968/M.L. Niple/35 for each of 4 groups	No significant differences; Ss may not have actually practiced the method.	4 groups; read once, use own best method, use SQ3R after learning about it, use SQ3R after practicing for 6 weeks.
1971/R.A. Palmatier/ College	Ss can improve in their notetaking abilities.	Stresses Recite and Review steps; we do not provide sufficient training time.
1972/V.M. Diggs/80 Comm. College	SQ3R followed by Mechanized Approach superior for general vocabulary and rate. Used throughout the semester, SQ3R was superior for total reading, reading social studies materials, and for vocabulary in context.	Small groups of 16 Ss each.
1972/J.T. Holmes/41 College	No differences in groups with underlining and SQ3R.	Training time not specified.
1975/S. Gurrola/68 College	No significant gain was made by any one method when SQ3R was compared to QR, SQR, and SQRR. The last sequence was more efficient.	More training and practice might have been justified.

Year/Researcher N/Group	Conclusions	Comments
1977/L.P. McNamara/ 308 Secondary school students	No significant differences between SQ3R, cloze procedure, and lecture-discussion groups.	Treatments were 7 school days in length.

Three additional surveys of the literature also indicate little support for the continued use of the SQ3R strategy. Wark pointed out that the SQ3R strategy has face validity; it sounds like a reasonable idea. His review then pointed out that only one study supported the Survey step; one study supported the Question step, and three studies supported the Recite step.[24] Abundant studies suggest the need for the Review step. In sum, Wark concludes that "Survey Q3R seems to be supported by tradition, rather than a rigorous consideration of the data on productivity." Later, Crewe and Hultgren[4] concluded that students were not presented with sufficient research data on which to base valid decisions about their study behavior. They wrote that the SQ3R strategy "does not warrant the emphasis it now receives."

Another fine analysis of the question on this much-referred-to-strategy was made by Spencer[20], who indicated that Robinson tried out his method and thought the results were very good. Spencer pointed out, however, that Robinson never formally tested the method. Even though Robinson claimed that there was evidence of the success of this method from several studies, Spencer is careful to note that no specific references were ever offered.

The most recent review of the literature by Johns and McNamara[11] in 1980 indicated some additional studies on the use of SQ3R. They concluded, however, that the superior usefulness of SQ3R has not been demonstrated empirically.

SQ3R clarifications

While the overall conclusion from studies on this study strategy questions its effectiveness, nevertheless, a number of clarifications and insights can be made from what has been written so far. Palmatier[16], for example, urges spending additional time on the strategy and keeping in mind the goal required of students — passing tests. This raises another dilemma in terms of our own goals: do we want to develop students who can study independently or who are trained to study for tests?

The other side of this question is represented by Tadlock[22], who claims that the SQ3R strategy works because it is based on an information processing theory of learning. She contends that the strategy, which was developed

in 1941, is supported by theory developed in 1967 and later. She further contends that, if students believed the strategy would work, they would probably use it. In order to believe it, students must first understand why it works. Three more reports help to shed some light on the question of why this, or perhaps other strategies, are not more widely accepted. Pauk[17] felt that the SQ3R was too complex and that students were more likely to use a shortened form. Dansereau and his colleagues[5] felt that students need detailed training in a study system. Their study provided two hours training for each of twelve weeks using networking, paraphrasing, and key idea statements for college students.

In what seemed to be an answer to Pauk's hope for a shortened technique, Orlando[15] developed the Preview, Check, Study strategy. It should be noted that the second step has three parts to it, so students have as much of a task as they would with the SQ3R process. Orlando did urge the use of a study strategy over the course of an entire semester.

Alternative strategies

At the final writing of this paper, no less than sixty study strategies had been uncovered.* Most strategies were developed for general content area reading. A few have particular applications such as in mathematics (Survey, Question, Read, Question, Compute, Question; and Survey, Question, Solve, Check, Repeat, Review); reading literature (Pauk's EVOKER and Rusnak's Annotated Independent Reading); and Mayfield's FAIR for low students.

Some strategies have received comment in the literature. Pauk referred to PANORAMA as "the eight-footed mastodon which hulked its way into our reading lives." He felt that the technique was ingenious and was based on the best principles of learning. He then commented: "But do we need a steam shovel when an ordinary hand shovel will do? Worse still, who has the time, strength, and the steam to use it?"[17] Pauk then admits that his own OK5R is just one step less than PANORAMA, but he does feel that he has made amends. No matter how well-based in learning theory, a strategy is rendered useless if students won't use it.

Most strategies are modifications of SQ3R, but too many of them result in too lengthy proceses for most students to deal with. The Annis and Annis study referred to earlier indicated that most students limit themselves to three steps in their study procedures.

Berg and Rentel[2], after reviewing the literature, pointed out that students who are motivated to improve and voluntarily enroll in study skills courses raise their grade point averages, and students who are similarly motivated but not enrolled in such courses do not register the same gains. Format and content of study skills courses do not seem to be nearly as important as motivation and interest.

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*A complete listing with references is available from the author.

Teaching study skills

A few final thoughts are in order after what has already been said about study strategies. Unless there is some type of individualizing, with the opportunity to practice the strategy, it is not likely that a training program will be effective. Further, Wooster[27] learned that experience in teaching a strategy shows that certain typical errors may occur, usually because old study methods interfere. Caverly[3] commented that study systems typically call for literal knowledge and that little inferencing or appliation takes place. He also stressed in his 3SQ3R that student prior knowledge must be thoroughly called to mind before reading begins.

According to Trillin[23], the use of SQ3R or other strategies is appropriate for students who can already select essential ideas and synthesize material. She feels that study skills, such as text-reading methods, are the mature processes by which learning is organized. Perhaps the most cogent comment was written almost twenty years ago by Olive Niles[13]:

> Skillful teachers know how to allow students to take more and more responsibility until one day, for most students not until some time late in senior high school, it is time to introduce SQ3R .... That Robinson's well-known technique is not more successful and popular stems from the fact that they have been expected to learn and use it before they are ready.

Perhaps the question posed by the title of this paper is not as important as is the matter of timing and the length of the training period for any given strategy.

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ART: A FUNDAMENTAL SKILLS INITIATIVE OF THE NAVY

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Introduction

The Department of the Navy has officially recognized the need for remedial training in basic educational skills among some personnel as a requirement to achieve its mission. The statement of policy is presented in Instruction 1510.3 that was issued by the Secretary of the Navy on 2 June 1978.[5] The Instruction states that "it is the policy of the Department of the Navy to provide, when indicated, on-duty remedial job-relevant basic skills training in order to fill personnel requirements."[5:1] Job-relevant basic skills are defined as "those capabilities prerequisite to efficient completion of Navy training programs, adequate job performance and career advancement. Notable among these are literacy, study and computational skills."[5:1]

The Navy has developed several fundamental skills training programs as a result of implementing its policy. The Academic Remedial Training (ART) Program is a basic reading and verbal skills program conducted at Recruit Training Centers that is designed to provide essential language skills needed by recruits to complete the academic requirements of recruit training. Other formal and ad-hoc programs address fundamental skill needs of specific groups of enlisted personnel.

ART — a historical perspective

The ART Program was officially established as a remedial reading course for recruits in 1967 and became operational immediately at the Navy's three Recruit Training Centers. Since the staff at each site was autonomous with respect to the choice of curriculum and testing plan for the program, three independent programs emerged under the rubric of the ART Program.

In 1978, standardization of the reading curriculum and the testing procedures used in the program was instituted by the Chief of Naval Technical Training. A verbal skills component that places emphasis on listening and speaking skills was added to the program at two recruit training centers

(Orlando and San Diego) in 1981. Historically, the singular purpose of ART has been to assist recruits in acquiring the reading skills required to complete basic training successfully. While the ultimate purpose remains the same, the addition of the verbal skills component to the program has expanded the scope of remediation to include listening and speaking skills of recruits who speak English as a second language.

Program design and procedures

The reading skills component of ART is based on a screening-diagnostic-prescriptive-criterion testing strategy. The Gates-MacGinitie Reading Comprehension Test, Level D, is presently used as a screening instrument with all recruits who enter the Navy.[4] A new policy on the use of Levels D, E, and F of the Gates will be implemented during the current fiscal year. The recruits who score below 6.0 reading grade level (RGL) on the initial administration of the Gates are retested with an alternate form. Based on the results from the second administration, the recruits with RGL scores below 4.0 and 6.0 are assigned to ART. The recruits with RGL scores below 4.0 are referred by the Recruit Aptitude Board for a decision on assignment to ART or review by the Naval Aptitude Board. Recruits who score above 6.0 RGL may be assigned to ART if they have academic performance problems after they begin recruit training.

The Stanford Diagnostic Reading Test, Brown Level, is administered to recruits immediately after they report to ART.[3] The results are used to identify the specific reading skill deficiencies that should be remediated. The reading curriculum is organized in six modules: phonetic analysis, structural analysis, vocabulary, reading comprehension, reading rate, and study skills.[1] Deficiencies in the first five areas are diagnosed with the Stanford. All recruits who are assigned to ART complete the study skills module. The recruit who is assigned all modules would normally complete the program within five weeks.

Prescriptive instructional activities utilizing largely elements from commercial reading materials are assigned to the recruit for remediation of each identified skill deficiency. Group instruction is used as a complement to the individualized, self-paced approach to learning. Criterion tests have been developed for use with the curriculum. The recruit must pass the criterion tests in a specified order matching the sequence of the modules.

The verbal skills curriculum is designed for ART recruits who have oral language deficiencies.[2] The identification is based on an interview dealing with the recruit's language background. The three weeks of instruction in this component focus on Navy vocabulary, grammatical structures, and language fluency. The methodology used in the curriculum incorporates group instruction, small group activities, and individual assignments. Criterion testing is utilized in assessing performance on each module.

The implementation of the standardized ART reading curriculum intro-

duced a requirement that a Computer-Managed Instruction (CMI) system would be used to perform test scoring functions. The CMI system scores the Gates, the Stanford, and the criterion tests employed in the screening, diagnostic, and criterion performance aspects of the reading component. Monthly reports on the educational and reading characteristics of the total recruit accessions are prepared routinely.

Recruit population profile

Data from monthly reports for fiscal year 1981 were compiled to provide a profile of the Navy's recruit population on high school graduation status and reading grade level based on the Gates. Descriptive statistics utilized in summarizing the data were frequency and percentage distributions. Inferential analysis was performed to determine confidence interval limits for comparing proportions.

Table 1 depicts the frequency and percentage distributions of the FY 1981 recruit population by RGL categories. The data indicated that only .50 percent of the recruits scored at or below 4.0 RGL on the first administration of the Gates. Slightly over 3 percent had RGL scores in the 4.0-6.0 RGL range. A total of 3.56 percent obtained scores at or below 6.0 RGL, the criterion for referral to ART. An additional 13 percent scored between 6.1 and 8.0 RGL. Almost 40 percent of the recruits obtained scores above 12.0 RGL. The raw data revealed that the median RGL was at approximately 11.0 RGL while the mean was about 10.0 RGL.

TABLE 1

Frequency and Percentage Distributions
of Recruits by Reading Grade Level

	Reading Grade Level Category						
	Below 4.0	4.0-6.0	6.1-8.0	8.1-10.0	10.1-12.0	Above 12.0	Total
f	428	2,630	11,185	13,737	23,896	34,075	89,951
%	.50	3.06	13.01	15.98	27.80	39.64	99.99

Frequency and percentage distributions are presented in Table 2 for the total recruit population in FY 1981 and the recruits who scored below 6.0 RGL on the Gates. The data revealed that approximately 78 percent of the total group were high school graduates. Among the recruits who obtained RGL scores below 6.0, almost 85 percent were high school graduates. These data indicated that a disproportionately high percentage of the high school graduates scored below 6.0 RGL. Calculation of the proportions of high school

graduates and non-high school graduates who had RGL scores below 6.0 resulted in proportions of .038 and .025 respectively. If the proportion for high school graduates had been the same as for non-high school graduates, 860 fewer recruits would have scored below 6.0 RGL. The confidence limits for the difference in proportions at the .95 level of confidence are .0107 and .0153. Since the limits do not include 0 within the range, the proportions for the two groups are statistically different at the .05 level of significance.

TABLE 2

Frequency and Percentage of Distributions of Recruits by High School Graduation Status

Recruit Group	High School Graduate		Non-High School Graduate		Total	
	f	%	f	%	f	%
All recruits	66,127	78.39	18,232	21.61	84,359	100.00
Below 6.0 RGL	2,510	84.65	455	15.35	2,965	100.00

Program evaluation

At the present time, the principal criterion used to evaluate ART is the percentage of attrition among students assigned to the program. The percentage is derived by multiplying 100 times the ratio of attrites to student flow. Student flow is defined as the sum of input (students assigned to ART), graduates, and attrites divided by 2. The data on these variables were obtained for the 1980 and 1981 fiscal years. These data are reported in Table 3.

TABLE 3

Summary of Evaluative Data on ART by Fiscal Year

VARIABLE*	FY 1980	FY 1981
Number assigned to ART	3,858	3,109
Percentage of accessions	4.24	3.24
Number of ART graduates	3,278	2,687
Number of ART attrites	309	245
Attrition percentage*	8.30	8.11

*Based on student flow

In FY 1980, the number of recruits assigned to ART was 3,858 or 4.24 percent of the total recruit population entering the Navy. The number and percentage declined in 1981 to 3,109 recruits representing 3.24 percent of the recruit population. If the FY 1980 rate of assignment to ART had prevailed in FY 1981, an additional 960 recruits would have been assigned to the program in FY 1981.

The data on ART graduates showed that 3,278 recruits graduated in FY 1980 while 2,687 recruits graduated in FY 1981. The number of attrites for the two years were 309 in FY 1980 and 245 in 1981. These numbers represent the actual numbers of graduates and attrites during the respective fiscal years. Some of the recruits who graduated or attrited in each fiscal year were assigned to ART in the previous fiscal year. The student flow statistic is used, therefore, to provide a measure of the number of recruits served during the year.

Based on the student flow, the percentage of recruits who attrited from ART in FY 1980 was 8.30 percent. The percentage who attrited in FY 1981 was 8.11 percent. The attrition reported for ART includes recruits who attrite for all reasons. Historically, approximately 4 percent of the recruits assigned to the program (half of the attrites) are dropped for academic reasons. The other half of the attrites are dropped for non-academic reasons (e.g. medical and legal reasons).

Summary

Basic skills training in the Navy has become increasingly important as the quality of the recruit population has declined in recent years and the job demands faced by enlisted personnel have expanded. In the context of an all volunteer force and reductions in the number of available personnel who qualify for military service, the Navy must maintain such programs in order to meet its mission requirements.

While ART has been in operation at the Navy's Recruit Training Centers for several yars, a standardized curriculum and testing plan have been utilized only since 1978. The population served by ART consists of those recruits who score at or below 6.0 RGL in reading comprehension on the screening test and recruits with higher RGL scores who have academic difficulty during recruit training. On the initial administration of the screening test, 3.56 percent of the recruits scored at or below 6.0 RGL — the criterion for assignment to ART. The program data indicate that only a small percentage of the Navy's recruits (3.24 percent in FY 1981) are assigned to ART as a result of screening test results or academic failure.

Higher proportions of high school graduates score below 6.0 RGL than non-high school graduates. While about 78 percent of the recruits who entered the Navy in FY 1981 were high school graduates, almost 85 percent of the recruits who scored below 6.0 RGL were high school graduates. The data revealed that 1.3 percent more of the high school graduates than non-high

school graduates scored below 6.0 RGL. This difference is significant for the two composite groups.

ART is highly successful in remediating the reading deficiencies of recruits assigned to the program. During the two most recent fiscal years, almost 92 percent of the recruits who entered the program graduated. Continued efforts to refine the program are expected to increase its effectiveness and importance in Navy training.

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ANTIBIOTICS FOR WRITING PROBLEMS OF OLDER BEGINNERS

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The Reading Center and Clinic at the University of Nevada, Las Vegas offers an adult tutorial literacy program. Since many of the adults in this program also experience difficulty in writing and spelling, the faculty has designed and field-tested materials and methods for developing writing literacy among adults. The Dettre Cursive was designed to teach cursive handwriting, and the Serum Measurement of Handwriting Ability was developed to assess cursive handwriting. Both of these methods emphasize the speed and legibility factors of handwriting ability. The faculty at the Reading Center and Clinic believes that as adults develop speed and legibility in their writing skills, their spelling skills will also improve. This belief is reflected in the materials and methods described throughout the paper. The paper is divided into three major areas: (1) research, which supports the methods used at the Reading Center and Clinic, (2) the Dettre Cursive, and (3) the Serum Measurement of Handwriting Ability.

Research

Numerous educational authorities have speculated on the relationship between handwriting and spelling. Kaminsky and Powers[7], Betts[2], and Horn[6] claim handwriting directly contributes to spelling achievement. Freeman[3], Green and Petty[4], and Hildreth[5] note that spelling errors are, in reality, handwriting errors. Otto and Koenke[9] state that failure in spelling might be manifested in careless, illegible handwriting. They suggest that illegibilities might result too from a kind of negative motivation — the desire to hide misspellings. This notion was further supported by Shaughnessy[11]. Shaughnessy adds that some people deliberately camouflage their spelling uncertainty by writing illegibly.

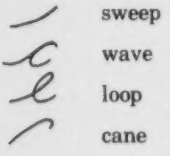
As noted earlier, both the Dettre Cursive and the Serum Measurement of Handwriting Ability reflect the speed and legibility factors in handwriting.

Research supports the premise that legibility and speed are the most important factors in handwriting ability. According to Anderson[1], and Otto and Anderson[8], legibility is the fundamental objective of handwriting programs. Petty, Petty, and Becking[10] agree that legibility is of the utmost importance. They add that, since handwriting must be done with reasonable speed for it to be a useful tool, the development of satisfactory speed is the second most important consideration.

Dettre cursive

Dettre writing survey. In developing the Dettre Cursive System, Dr. Dettre felt the need to screen individuals to decide whether the cursive writing instruction is necessary. An instrument was developed which tests handwriting through copying, writing from dictation, and spelling vocabulary words through composition. The survey is scored on letter formation, slant, spacing, and alignment as well as on the number of letters per minute written, a factor which determines the level of automaticity of the writing. Once the screening has been completed, we determine whether the student needs cursive instruction. If so, Dettre Cursive is employed.

Dettre cursive. The most striking feature of the Dettre Cursive, besides developing legible handwriting, is the aid it gives in developing reading and spelling sight vocabulary at the automatic level. The Dettre Cursive is different from many systems in that it stresses the motor continuity through lead-in strokes. There are four lead-in strokes:



The system is built around developing the letters through the lead-in strokes. The sweep stroke letters — *u, i, t, w,* and *s* — are taught first. In order to be able to compose and write sentences, the capital *I* is also taught. Next come the wave letters — *c, a, d, o,* and the capitals *A* and *C*.

The lessons progress through the various lead-in strokes to the more complicated lead-in plus strokes. For instance, lesson 7 includes loop and letters *f, h* and *k* — loop plus tail, loop plus cane, etc.

As each letter is taught, the strokes are verbalized so the letter *s* (lesson one) would be *sweep, point, sail, sweep.* The students are encouraged to verbalize as they write. Often, with adult students, verbalization will not occur, but rather sub-vocalization will be used.

In addition to the instruction given in making the letters and learning the strokes, practice is given in each lesson to the joining of the letters to form words so that students can attain the automatic level of writing. As far as is possible, with the possible exception of some of the words using capital letters, the words which are used are sight vocabulary words. A timed writing practice is also given in each lesson to help the student increase his speed while maintaining a consistent level of legibility. Each student is also required to practice the letters and words from each lesson in the mastery practice section as homework — requiring one page per day of practice.

At the outset of instruction and throughout the course of instruction, proper posture, paper position, and pencil position are stressed.

To date, the program has been used with success with both young adolescent and adult populations. It has also been used on a tutorial basis with young adolescents. The length of time varied from one hour, two times per week for six weeks, to one hour, one time per week for twelve weeks. In each format, student handwriting improved significantly.

The adult populations with which the program has been used have demonstrated a commensurate success. In the first group of twelve adult students, eleven were mentally handicapped. The class was conducted two times per week for one hour a session for ten weeks.

At the beginning of the program, none of the students were using cursive writing as the preferred mode of writing. At the end of the period, five of the students were writing legibly at the minimal adult automatic rate of 50-60 letters per minute. One was writing above that rate. Three were writing at the rate of 40-50 letters per minute (approximately 4th grade level), two were writing at 20-30 letters per minute, and one was at the nonautomatic, beginner level.

The second group consisted of six adults and one adolescent, all but one of whom were considered to be of normal intelligence. This class was conducted for five weeks, two times per week for one hour per session. At the end of the class, six of the students were at the minimal adult automatic rate (50-60 letters per minute). The adolescent had succeeded in successfully changing his handwriting from left handed to right handed.

Conclusions. While the testing of the program has not as yet been extensive, the results are very encouraging. The ease of instruction and the visibility of results make the program very appealing. Additionally the high adaptability of the program increases its usefulness. It can be used with equal success on an individual basis in a tutorial setting, in an adult literacy classroom setting, and in a learning disabilities setting in college, high school and elementary schools, where improvement and success are almost assured, giving the student confidence and the ability to perform a needed and visible task. The program can also be used in an elementary classroom to teach handwriting and perhaps prevent some handwriting problems in years to come. In addition it also is of aid in learning both reading and spelling.

Serum measurement of handwriting ability

As part of her doctoral study, Serum developed a procedure which can be used to assess the cursive handwriting ability of adults. The Serum Measurement of Handwriting Ability (SMHA) consists of the number of cursive letters written in one minute that are not confused with any other letter. The SMHA is based on the following statements:

1. Providing a letter is not confused with any other letter, personal variations of letter forms are accepted.
2. The letter *t* must be properly crossed.
3. The letter *i* must be dotted properly.
4. The letters *e* and *l* must be looped.
5. The tops of rounded letters *(m, n, h)* must be rounded — not pointed.
6. Looped letters *(a, d, g, o, p)* must be left open, but closed at top.

During a two-hour inservice, Serum trained three judges to score cursive handwriting using the SMHA procedure. The judges then scored five handwriting samples using the SMHA. Interjudge reliability coefficients ranged from .84–.97.

The judges were then asked to score handwriting samples which were written by 88 college freshmen at the University of Nevada, Las Vegas. Of the 88 college freshmen, there were 48 females and 40 males.

The results of the findings indicate that 29% of the letters produced by the males and 24% of the letters produced by females were illegible. Additionally, Serum examined the difference in the handwriting speed between the male and female subjects. According to Freeman[3], the average adult who does a great deal of writing — such as a college student — may easily produce a total of 130 letters per minute. Serum found that males produced an average of 92 letters per minute, while females produced an average of 101 letters per minute. Thus, either Freeman's norms are outdated, or perhaps the 88 college freshmen could utilize the Dettre Cursive to improve both speed and legibility of their handwriting.

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MOTIVATIONAL TECHNIQUES FOR THE IMPROVEMENT OF COLLEGE READING SCORES: BASIC VOCABULARY SKILLS AND BASIC COMPREHENSION DRILLS

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The number of students lacking in basic skills necessary to enter college who graduate from metropolitan high schools each year appears to be on the increase each year. This is not necessarily an indictment of high school curricula: it is a signal for universities to implement innovative learning programs to assist this massive population.

The problem for students is not usually one of a lack of intellectual ability, but a combination of many other factors. Some of the factors include limited educational opportunities, poor self-concept, limited personal counseling, and a lack of understanding of the tasks that confront college students.

Many innovative approaches and programs have been offered to assist the high school graduate who has a basic skill deficiency. In "Project Transition: A Program for Underachieving College Bound High School Seniors," Miller[12] stated that students can succeed in college if they are willing to accept the responsibility for motivation, discipline, and study. Those programs aimed at rescuing underachievers must be structured to encourage them and to provide them many opportunities to learn to assist themselves.

Reading comprehension has many barriers. Caskey[2] contended that what is most desperately needed is an assessment of comprehension and the reasons for its frequent incompleteness and inaccuracy. "Have we made as certain as we possibly can that the reader himself sees the connection between the practice exercise and the reading tasks he encounters elsewhere?"

An interdisciplinary and functional vocabulary is essential for success in the university. Students who lack the basic skills for vocabulary development must recognize the problem at early stages of their academic careers and launch an organized and systematic attack on the problem if they are to gain this vocabulary.

The analytic methods of vocabulary development appear to be an effec-

tive alternative for students who lack basic skills in vocabulary development. Lindsey[11] contended the most common analytic method, the whole word approach, is most successful with students with specific kinds of learning difficulties common among poor secondary readers. This approach has also been recommended as a method for students who have not learned to read because of nonvisual conditions, such as immaturity, excessive absences, and inadequate teaching. Fillyáw[6] suggested that there were significant differences in the performance of black and white students on *total* and subtests in auditory discrimination. Otto and McMenemy[13] acknowledged the whole word approach as especially beneficial for students with auditory deficits, inasmuch as the word is taught as a unit instead of a collection of small elements or phonemes. Spache[17] found the whole word approach to be effective for students who had such limited vocabularies that they were unable to grasp the meaning from the text. Durkin[4] also proposed that the whole word approach be employed with students with deficiencies in analytic skills, a characteristic common among adolescents with reading problems.

The deficiencies in basic communication skills can be a serious factor for minorities who are entering the university. Observation of the growing problem of deficiencies in basic skills has led the researcher to the following hypotheses: (1) Students who receive training in the basic skills of comprehension and vocabulary development should perform better in their academic careers. (2) Students who receive training in motivational techniques and strategies should experience a gain in college achievement and success.

Design of the study

A random sample of 126 freshmen was selected from the entering fall enrollment of 1981 for this study. In order to get a more complete profile of the entering freshman students, two kinds of data were collected on freshmen — test performance and demographic data. During mid-September, 1981, the *Nelson-Denny Reading Test* (Form F) was administered to the 126 freshmen. We also administered a demographic data survey (designed by the researcher) to observe other variables that are related to academic success. Some of these demographic variables were major/course of study, sex, race, birth order, number of siblings in family, perception of study habits, strongest academic areas, working status of mother, working status of father, and education of mother and father.

The procedure involved analyzing test performance scores and demographic data. Further diagnostic evaluations were done for each student prior to beginning skill activities in the laboratory to help assess the areas of skill deficiencies. Prescriptive activities were employed during a two-day per week varied reading laboratory situation. All students attended three scheduled twenty-minute, highly intensive skills and drills sessions. The sessions consisted of basic vocabulary skills, basic comprehension drills, and

motivational enhancement techniques. Students rotated from each session after each 20-minute period.

Brief overview of skill sessions

Vocabulary development skills. The vocabulary development sessions consisted of directed activities in the study of prefixes, suffixes, base words, and the meanings of synonyms from *2300 Steps to Word Power*[8], average difficulty, difficult words, and very difficult words. Other word lists and practice skills were incorporated in the sessions. The goal for each session was that each student master twenty-five words per session. Vocabulary tests were given at the beginning of each session to test the recall for words studied. Progress charts were constructed for each student. The progress charts served as feedback mechanism to enhance motivation.

Comprehension Development Skills. An individualized, analytic approach was taken to the study of comprehension. Each student was tested for specific comprehension skills in the following areas: subject matter, generalization, detail, significance, conclusion, application, tone and attitude, vocabulary, and communication techniques. The basic program for the comprehension skills was *100 Passages to Develop Reading Comprehension*[14]. The goal for each session was to master at least two comprehension skills. Specific practice and drills were done to ensure success with the specific skills. (Students started on the skills sequence based upon their total comprehension scores on the comprehension tests.) All students were presented with practice skills sheets which emphasized the elements of specific comprehension skills. These elements were successfully mastered prior to reading the selection or passage. Comprehension skills tests were given. Students were expected to perform successfully on at least three timed passages each session. All activities were scored and then entered on student progress sheets. The difficulty-levels of the passages were increased as the students mastered the lower level comprehension questions. Achievement records and progress charts were prepared for each student.

Motivational enhancement techniques. The most effective technique was the effective management system employed. The giving of immediate feedback to each student served as a motivational factor for each student, bringing about a high level of personal involvement. Students wanted to improve their basic skills in the communicative arts. Conferences to discuss the progress of each student also served as sessions to relieve frustrations that had been suppressed for many years.

Trained laboratory assistants. These lab assistants were undergraduate students who assisted the director of Freshman Studies English with departmental tasks. These five students had been given special training in reading diagnosis, vocabulary development, comprehension development and the art of receiving and giving constructive feedback.

Results

Data were obtained from administering the *Nelson-Denny Reading Test*, Form F and from the Demographic Data Survey.

The statistical procedures used in analyzing the data were descriptive statistics: measures of central tendency, percentages, correlational analysis of each demographic variable with the test scores.

Values ranged from no relationship for birth order and test scores of subjects through .14 for education of father and test scores of students. By and large, none of the demographic variables correlated well with total test scores. In fact, six (6) of the demographic variables had low negative relationships.

Forty-seven (47) or 37% of the sample were first borns. Forty (40) or 32% of the subjects have mothers who had graduated from high schools, and on the other hand, thirty-eight (38) or 30% of the fathers have completed high school. Seventy-eight (78) or 62% of the subjects have a positive perception of study habits versus 48 or 38% of the subjects who had a negative perception of study habits.

The subjects scored an average of 1 to 2 grade levels higher on the *Nelson-Denny Reading Test* (Form F). The mean vocabulary score was 9.0 grade equivalence score. The mean comprehension score was 10.0 grade equivalence score. The total test score for all subjects was $\bar{X} = 10.0$ grade equivalence score.

Conclusions

Based on these findings, the researcher concludes that there is no significant difference in test performance scores of university students when compared to demographic variables of the Demographic Survey.

Students who are deficient in basic skills of reading comprehension and vocabulary development may be helped to overcome barriers to comprehension by employing systematic instruction with organized practice and skill sessions, which provide immediate corrective or constructive feedback to the students.

University students who are deficient in the basic skills of reading comprehension and vocabulary development will only overcome the barriers of reading when they are able to analyze their own difficulties and make functional connections between practice for developing skills and the pleasurable rewards of independent reading for success in an academic environment.

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HOLISTIC EVALUATION OF INTERNATIONAL TEACHING ASSISTANTS' ORAL ENGLISH SKILLS USING THE TICS

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The University of California, Riverside has the second highest proportion of foreign graduate students in the UC system. Many of these students become teaching assistants, research assistants, or associate instructors at some time during their studies at UCR. Not all of these students have sufficient English communication skills to succeed as classroom instructors. When such a foreign TA becomes a classroom instructor, undergraduate students often complain about his/her communication skills.

The Learning and Study Skills Center at UCR was asked by the Graduate Division to evaluate the utility of a commercially available instrument for testing the oral English skills of prospective TA's, RA's, and associate instructors. Examination of the instrument raised concerns regarding turn-around time, subject specificity, non-verbal communication, examinee's role, and administrative control. The Center advised the Graduate Division not to use the commercially available instrument and instead recommended that the Center develop an instrument to deal with UCR's unique needs. As a result, the Center was authorized to develop and implement a holistic instrument for evaluating the communication skills of foreign TA's, RA's, and associate instructors.

The resulting evaluation procedure involves the student's department at all stages of the process. For the test, the examinee presents a mini-lesson which is video-taped and later evaluated by a team consisting of one person each from the student's department, the Center, and the English Department. The categories of communication skills addressed in the instrument are Physical Presence, Oral Performance, Grammar, Organization, and Style and Quality of Expression. This instrument successfully avoids problems raised regarding the commercial test evaluated and provides additional benefits to UCR.

Like many universities and colleges in the United States, UCR accepts a

significant number of foreign students. This number has been increasing over the years, partially as a result of other countries' growing demands for the higher education services available in the U.S.A. and partially as an institutional response to the declining numbers of American students available.

UCR has the highest proportion of graduate students and the second highest proportion of foreign graduate students of any UC campus. UCR's current enrollment of 4,716 consists of 3,291 undergraduates and 1,426 graduates. Of the graduate students, 316 (22%) are foreign students. This high concentration of foreign graduate students has brought a high proportion of foreign graduate teaching assistants (TA's), research assistants (RA's), and associate instructors. The fifty-six foreign TA's and RA's represent 11% of the teaching assistants, research assistants, and associate instructors at UCR. While these foreign TA's are usually competent within their fields, undergraduate students frequently complain about the communication skills of such TA's. These students often express dissatisfaction with their classes as a result of their difficulties with the foreign TA's.

Making this problem worse, graduate departments have not always met and evaluated the prospective TA's prior to offering these students TA positions. Decisions on TA slots are often made on the basis of TOEFL scores, which do not include a spoken English score, and written recommendations made by foreign colleagues with whom professors wish to keep amicable relations. Hence, such letters of recommendation carry significant weight in the decision-making process. Unfortunately, these foreign colleagues are not always professionally able to determine the English communication skills of the students being recommended, and these recommendations are often not an accurate reflection of the student's skills.

As a result, graduate departments frequently offer TA positions to foreign graduate students who are not equipped with the communication skills necessary to function as instructors in University classes. When these students arrive on campus, it is then too late to take away their previously offered TA position; therefore, departments are left with underprepared TA's and dissatisfied students.

Genesis of the test

The *Test of Instructional Communication Skills*, developed by the author with the assistance of Dr. Patrick Moran, originated as a result of inquiries by UCR's Graduate Division regarding a new testing service offered by ETS, the *Test of Spoken English*. Our Graduate Dean asked the Learning and Study Skills Center to comment on the utility of this test for evaluating UCR's prospective foreign TA's. As a result of our analysis of the test, the Center recommended that the Graduate Division not use the test. Several factors affected this decision.

The first of these factors was turn-around time. ETS typically has a

turn-around time of from four to six weeks. For administrative purposes, this length of time is a significant problem. When a prospective TA arrives at a campus such as UCR, where a ten-week quarter system is used, the University does not have four to six weeks to wait for an evaluation of the TA's skills before the TA is allowed to participate in teaching activities.

Lack of subject specificity is as much a problem with the ETS test as turn-around time. Prospective TA's are presumably more proficient in the English necessary for their subject areas than they are with English in general. An appraisal of a TA's English skills that does not test the subject-specific English capability of the students will not make a proper assessment of the student's ability to function as a TA in that specific subject. The ETS instrument does not address this greater familiarity with subject-specific English.

The third problem with the ETS instrument is that it does not test non-verbal communication skills. Communication is not solely a verbal process: the listener and speaker use many other culture and language-based cues to express and understand a communicative attempt. By using only an audio-tape recording of the student, the ETS test does not evaluate the speaker as a total communicator. If the foreign instructor uses supportive non-verbal systems well (diagrams, chalkboard, etc.), he or she can make up for some of his or her deficiencies in verbal skills. Students in classes view TA's as total communicators; so should a test which evaluates prospective TA's.

Another important deficiency in the ETS test is that it does not put the prospective TA in the role of instructor. An individual takes on different language behaviors depending on his or her audience and on the speaker's role relative to that of the listener(s). The TA, as an instructor, is in a power or control position relative to students; therefore, a test of a prospective TA's language skills should attempt to place the TA in a control position. The ETS's tape format does not put the test-taker in control of the communication process because audio tapes require the test-taker to react passively rather than to interact.

The final difficulty with the ETS test is that UCR would not set the criteria for nor adminster the test. The ability to set testing criteria is vital because different institutions have standards appropriate to their needs and missions. Control of the administration of the test is also important because when accountability for the subsequent evaluations is kept under local control, adjustments to the process and criteria can be made with greater ease.

Administration and format of the TICS

Administrative procedures. In order to avoid the difficulties previously discussed regarding ETS's *Test of Spoken English*, the TICS was developed to be as similar as possible to the lab or class situations that TA's encounter at the University. In general, TA's must be able to prepare and present lessons

or instructions and to understand and answer student questions. Therefore, any test which purports to evaluate a prospective TA's language capabilities must permit evaluation of these facets of communicative ability.

To accomplish this goal, the TICS uses the following procedure. First, the graduate department that wishes to offer a TA-ship to a student submits a list of three topics from a lower division course that a TA might teach. The student selects one of these topics, prepares a ten to fifteen minute presentation on it, and attempts to anticipate questions that might be asked during a question-and-answer period following the presentation. These activities are quite similar to those a TA would have to go through in preparing for a lab or class. It is important to emphasize that TA's have the opportunity to prepare for labs and classes and that, therefore, examinees should be able to prepare for the test in a similar fashion.

Before the test, the student is given a few minutes to get organized, put material on the board, and ask any last minute questions. The examiner tries to use this period to help the student relax by initiating informal conversation. Following this period, the examiner, who is normally the only other person in the room, asks the student to begin the presentation. The examiner listens and takes notes on the content and quality of the presentation. The content notes allow the examiner to ask questions following the presentation, while the quality notes contribute to the evaluation that follows the test. After the presentation, the examiner asks the student questions. Both the presentation and the question/answer period are videotaped through a one-way mirror to record the materials unobtrusively. Finally, after the presentation and question/answer period are over, the student is given a chance to ask questions and relax before he or she leaves. Following the administration of the test, a panel of three judges — one each from the Learning and Study Skills Center, the English Department, and the student's department — meets and uses a set of holistic criteria to evaluate the student's performance.

Format. The TICS evaluates five different categories of instructional communication skills: Physical Presence, Oral Performance, Grammar, Organization, and Style and Quality of Expression. Each of these categories is subdivided into the two areas of observable language skill or communicative behavior. Finally, each of these categories is divided into five levels of competence: excellent, good, acceptable, weak, and poor. The student must be rated as acceptable in all five categories of instructional communication skills to pass the test. This level represents a minimum base of skills upon which the student can build; students are not expected to be polished teachers or public speakers.

The first category, Physical Presence, involves eye contact, body movements, and use of visual aids. These three aspects of the presentation constitute the non-verbal level of communication. To be rated acceptable, the student must maintain some eye contact, make some use of visual aids, and have mannerisms that do not significantly distract his or her audience.

The next category, Oral Performance, concerns three areas: fluency, intonation, and pronunciation. Fluency is the rate and connectedness of the speaker's language production; intonation is the accuracy of the speaker's use of pitch and stress; and pronunciation is the phonetic accuracy of the speaker. The speaker's presentation must not be significantly distracting in any of these areas.

Grammar, the third category, involves the totality of the structure of English. The emphasis here is not on production of the entire range of grammatically correct structures. Rather, the speaker is expected to use, with a degree of accuracy that does not significantly impair comprehension of the message, whatever structures necessary for the presentation.

The following category, Organization, incorporates the structure of the presentation (introduction, body, and conclusion), the support or details, the focus, and the pace. An "acceptable" presentation may lack an introduction or conclusion (not both), support or examples, or focus. If more than one of these elements is lacking, the presentation is not acceptable. In addition to these elements the speaker may have attempted to communicate too much or little information in the period of time allotted for the presentation.

The final category, Style and Quality of Expression, includes several aspects of interaction with the audience. These areas are tone of voice, volume, vocabulary, appropriateness of language for the audience, and ability to answer questions. The first two elements are included in recognition of a TA's need for an assertive yet not aggressive classroom posture. The issue of appropriateness involves the correct level of formality of language; the level must not be too intimate or formal for the classroom situation. Finally, the speaker must be able to answer most but not all of the questions asked during or following the presentation.

The evaluation

Within a week following the taping of the presentation, the three-person panel of judges meets to judge the speaker's performance. If the department does not wish to participate, a third member of the panel is chosen from either the Learning and Study Skills Center or the Basic Writing Program. This panel must reach a consensus regarding the speaker's level on each of the five categories.

To reach this consensus, the panel uses the tape and the administrator's notes and observations as raw data. Should a speaker's rating fall between two levels, the panel must agree that the deviation from one facet of the criteria is offset by another facet. The results of this evaluation are summarized on a Speaker Evaluation Form and then condensed onto a score report sheet that is sent to the department and the Graduate Division.

Part of this score report is a set of comments on the specific strengths and weaknesses of the speaker. Should the student not pass the exam, these comments form the basis of the remedial work the students must undergo

prior to retaking the test. The Graduate Division, in establishing this testing program, has mandated that a department that offers a position to a student must provide the promised financial support to the student regardless of the test's results. Hence, the department must either find other work for the student or absorb the loss without penalizing the student. This safeguard prevents the departments from withdrawing a student's necessary financial support while he or she is getting needed remedial assistance.

Benefits of the TICS

As mentioned above, there were five major areas of concern regarding the *Test of Spoken English:* length of turn-around time, lack of subject specificity, lack of a non-verbal skills component, improper role for prospective TA, and lack of local control of criteria and administration. Each of these concerns is dealt with by the TICS.

In addition to addressing these concerns, the TICS can provide two additional benefits to an institution. The first of these is that the specific evaluation of strengths and weaknesses allows an institution to provide appropriate remedial language instruction for otherwise capable foreign TA's. Once such students have been identified, they are given specific feedback on their performance and provided with services to help eliminate such skill deficits.

The second benefit is that the TICS provides the department with an integral role in the testing procedure. If a department chooses not to participate, it loses the right to complain about the results. Politically, this input is important because the department is not being asked to accept results or criteria imposed from the outside; it has the power and means to affect the process.

Summary

As a whole, this test promises to provide an equitable, realistic, and usable procedure for evaluating the oral communication skills of prospective foreign TA's. Because it is modeled on the communication situations that TA's have to confront, the TICS overcomes the difficulties inherent in the *Test of Spoken English*. While no test can be a perfect instrument for assessing communicative skill, this test is flexible enough to allow an institution to respond to new situations should the mission of the institution change or should a change in criteria be deemed desirable.

The TICS has been used successfully at UCR. The Fall 1981 test administration, while limited, demonstrated that the procedures and criteria could be successfully applied. Further administrations are planned for next year, and the University has been pleased with the results to date. This test or a similar locally developed instrument would be a useful tool for any institution that wished to test its foreign graduate TA's without using commercially prepared instruments.

AN EXPERIENTIAL APPROACH TO EVALUATING TUTORS

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In evaluating the effectiveness of a tutorial program, administrators often emphasize statistics relating to the progress of students, the actual number of student contacts per tutor, and the overall benefit of the tutoring program to the institution. And though these statistics describe important effects of tutoring, how often do we focus our attention on the heart of our academic support program, our tutors? In addition, how often do we provide our tutors with strong, professional support concerning their growth as paraprofessionals?

An experiential approach to evaluation of a tutor can provide direct, immediate analysis of the interaction between the tutor and the student. The assumption of this process is that as tutors become more aware of their communication style, they become more confident of their tutoring strengths; as a result, the whole tutoring program becomes more effective in offering quality service to students.

Before we can evaluate tutor performance, though, we need to determine those essential qualities and skills of good tutors. In working with tutors at the Center for Human Enrichment at the University of Northern Colorado, I stress the importance of establishing good rapport, goal setting, probing, listening, helping the student discover the content, and evaluating student progress. To describe what happens during a tutoring session, I wrote a tutor evaluation observation checklist that analyzes each phase of a tutoring session:

Establishing session

1. establishing a comfortable working environment
2. listening to student needs
3. reviewing course material
4. determining specific tutor goals

Sharing information

1. probing student's background knowledge
2. allowing the student time to figure things out
3. presenting material in a variety of ways
4. using study techniques
5. keeping the student motivated
6. giving student appropriate feedback
7. allowing the student to make at least 50% of the responses
8. displaying sensitivity to the student

Ending session

1. reviewing session material
2. discussing student's growth in meeting session goals
3. summarizing what the student has learned and what the student needs to learn
4. determining next session date, time, and place

To initiate the tutors to the experiential approach, I discussed the process with them. Since the tutors who participated in this process were enrolled in the Center for Human Enrichment's training course, Developing Tutoring Skills, each participated in this process as a final exam. The true test of having mastered these tutoring skills was not demonstrated merely by answering an objective exam but by applying these skills to actual experience. In one section of the course this experience was also videotaped so that the tutors would be able to self-critique their performance.

The experiential approach can best be summarized as follows:

Distribute the observation check list prior to the session. The tutor should have the opportunity to review the check list with the tutor coordinator, especially to clarify any concepts that are listed on the checklist. However, this checklist should be discussed in the context of the holistic process of tutoring; each point is only a marker indicating growth. In addition, the tutor needs to be aware that the purpose of the evaluation is to promote growth as a paraprofessional, and to emphasize the observation session as a positive experience.

Schedule the session. Due to the logistics of watching an entire tutoring session (which in some cases, can last many hours), a mini session of twenty minutes to half an hour should be planned. In addition, before the session starts the student should be aware that the tutor is being evaluated and not the student. The student should be aware of the existence of a third party. If this situation is too uncomfortable for the student, either a two-way mirror could be used, or the tutor could choose to work with another student. Ideally, the tutor should work with a student whom he/she has already tutored. In other cases, a tutor could role play the experience with another tutor.

Observe the tutoring session. Note the tutor's style. As the session proceeds, use the observation checklist to note the session's progress. Add

comments, concerns and suggestions where appropriate.

Give the tutor the checklist. While the tutor is completing the observation checklist, the student should evaluate tutor effectiveness by responding to a series of questions that pinpoint tutor strengths. After completing this evaluation, the student should be thanked for participating and requested to leave the room.

Compare responses. Add student comments where appropriate. The most significant part of this process occurs when the tutor and coordinator discuss each response to the checklist. At this point, the tutor is able to describe how closely the session resembles other tutoring sessions and is able to articulate what he/she feels are tutoring strengths and weaknesses. In my experience I have discovered that the tutors often are their own severest critics and appreciate hearing positive criticism. Many of the tutors, who originally may have cringed at the idea of observation (especially on videotape!), conceded that they appreciated having objective professional advice about their tutoring style.

The benefits of this process provide tutors with direct and immediate feedback about their tutoring style and give them an opportunity to learn how to improve their working relationship with students. For the students in the course, the experiential approach provided a realistic basis for evaluation and a chance to apply learning theory instead of just being tested on it. In addition, as a final exam, the tutors received more than just a grade; they truly discovered their strengths and weaknesses in the art of tutoring. Also, those tutors who were videotaped had the chance to see themselves as others see them.

In spite of the pressure of such an experience, the tutors were overwhelmingly positive in their responses to it. Remarks included, "It was an affirmation to me that I was applying the skills and techniques properly...It gave us a chance to show our style of tutoring...The only way to develop any skill is by practice and constructive criticism...It was good to be appraised about my strong points; my confidence in my effectiveness was bolstered...I feel that experience is the best teacher."

As the tutorial coordinator for the Center for Human Enrichment, I also found that this approach was a benefit to our program. The experiential approach gave me an opportunity to give tutors direct feedback about their style, to discuss alternative learning methods, to give them some positive strokes, to directly observe how the students respond to the tutors, and to enhance communication within the program. In essence, I was able to feel the "heartbeat" of the tutorial process.

In summary, if tutoring can be viewed as a process encompassing the gradual unfolding of student and tutor ideas, the dynamic interaction between the student and the tutor, and the striving for understanding, then the process of evaluating a tutor's performance also needs to portray a realistic sense of this interplay. Ultimately, the only way questions about tutor performance can be answered is to observe the tutor in action.

APPENDIX

Name _____ Date _____

Tutor Evaluation

During the tutoring session I: (yes/no)

_____ 1. Established a comfortable tutoring environment at the beginning of the session.

_____ 2. Listened to my student at the beginning of the session to find out what he/she needed to work on.

_____ 3. Negotiated tutoring goals at the beginning of the session.

_____ 4. Determined specific tutor goals at the beginning of the session.

_____ 5. Utilized probing strategies.

_____ 6. Allowed my student ample time to figure things out.

_____ 7. Worked on small chunks of information rather than large chunks.

_____ 8. Used mnemonic clues.

_____ 9. Presented material in a variety of ways.

_____ 10. Utilized my resources.

_____ 11. Allowed time for my student to ask questions periodically during the session.

_____ 12. Gave my student appropriate feedback about his/her progress.

_____ 13. Provided encouragement.

_____ 14. Displayed sensitivity in understanding my student's learning needs.

_____ 15. Kept my student motivated.

_____ 16. Allowed time for review.

_____ 17. Allowed time to evaluate the session goals.

_____ 18. Discussed with my student his/her progress in meeting the session goals.

_____ 19. At the end of the session, summarized what the student learned and what the student needs to learn.

_____ 20. Overall, allowed the student to make at least 50% of the statements/responses during the tutoring session.

Comments:

IDENTIFICATION OF PROBLEM READERS IN THE REGULAR CLASSROOM: HOW USEFUL IS IT?

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The problem

Attrition of students from courses and from school is a major problem for community colleges. The literature shows that 50 percent and more leave school each semester.[1,2,3] Although a substantial number of those who leave college do so for reasons over which the colleges have little control, a good proportion of attrition and failure could well be reduced by appropriate college efforts.

Increasingly, "new students" are arriving at the community college open door, underprepared and often unaware of the extent of their academic inadequacies. The problem is compounded because most mandatory entrance assessment was eliminated in the late '60's and early '70's as being "too threatening" to students. As schools adopted the philosophy of the "student's right to fail," restrictions and prerequisites were eliminated from many courses, particularly those needed to complete general education requirements. As a result of this lack of accurate personal assessment and lack of clear course guidelines, combined in many cases with serious skills deficiencies, many students have made inappropriate course selections and have found themselves struggling and failing.

The research for this study attempted to deal with the problem of underprepared students who are registered in the regular curriculum. It considered the question of whether testing students once they are already in a class, then providing their instructors with information as to those who were reading below the textbook level for that class and offering assistance, could decrease the attrition and failure rate for a class.

Design

A group of 13 college instructors at Yuba College, in Marysville, California, volunteered to have students tested in one or more of their classes. Eight

hundred and seventy-eight students in 28 different courses were tested within the first two weeks of Fall semester, 1981, using the Minnesota Reading Assessment (Raygor, 1980). The instructors represented a wide range of disciplines.

At the same time, the readability level of the texts for each class was established, using the Raygor Readability Graph. The grade level was then correlated to a specific test score, using information in the test instructor's manual. If a student's test score fell below the textbook level score, the student was considered to be at some risk in the course. The risk level was different for each course, depending on the texts.

The names of the students identified as being at some risk were given to each instructor. The instructor was encouraged to talk to the students about potential problems that might occur in dealing with the text and to offer assistance or suggest programs and tutoring in the Learning Skills Center.

The mean attrition/failure rate was established for each course by averaging the rates from the three previous semesters, and then doing chi square analysis to see if the mean rate was acceptable to use as a comparison with the rate for Fall, 1981. Three classes were dropped from the study because there was too wide a variation in rates over different semesters. A one-tailed z test was then performed for the compared rates to see if there was a reduction in the 1981 attrition/failure rate that was significant at the .95 confidence level.

In addition to the statistical comparison that was made, all instructors were asked to fill out a questionnaire and to respond on tape to several open-ended questions.

Results and discussion

Although 60 percent of those classes examined did not have a reduction in failure/attrition from the previous mean rate, only 29 percent, 8 classes, had a reduction that was significant at the .95 level. Giving instructors information about students that are already enrolled and offering assistance may be of some use, but does not appear to produce significant results in reducing attrition or failure if students are reading below the textbook level, at least within a single semester.

Nevertheless, results from the questionnaire and interviews, which were combined to provide answers to five major questions, identified a number of benefits of the study.

Question 1: If instructors were to be given early information identifying which students are potential high-risk students, what type of information would be useful?

Ten, or 83 percent, felt that just getting the names of students with low scores was valuable, that they did not need to know the exact scores; three, or 17 percent, wanted the scores of all their students.

Eighty-three percent also felt that the information about the readability

level of their textbook was useful. At least three instructors have since indicated they will look for different textbooks.

Question 2: If high-risk students were to be identified for instructors, what would they do with that information?

Sixty-seven percent said they had provided more assistance than usual for their students, and at least half had made changes in their courses or were intending to. One instructor said he gave more frequent contact to students during labs and worked to increase their confidence. Others mentioned presenting introductory material more slowly and more thoroughly, making lecture notes available for students to look over, outlining their lectures on the blackboard, and even making more effort to learn students' names. Several instructors said the study had definitely raised their consciousness about the reading problems of their students.

Eighty-five percent said they urged students to use the Learning Skills Center tutors and programs, and five instructors actually brought students to the Center for additional assistance.

Question 3: If early intervention techniques were to be used with high-risk students, what kinds are most appropriate?

Although most of the instructors indicated they wanted weak students to work with tutors, 50 percent were uncertain as to whether their students had actually sought out assistance. Some indicated they felt it was only their better students who had come for help. (In actuality, 31 percent of the identified high-risk students came for tutoring at least once, compared with only 17 percent of the total number tested.)

Question 4: If early identification and intervention is offered to instructors, do reactions differ with transfer and vocational courses?

Of the 7 instructors who said they made changes in their courses, 5 were vocational instructors; of the 4 who said they had no idea which students got extra help, 3 were transfer class instructors. Of 5 who found their students "already knew" they were having problems, all were vocational instructors. Of 7 who found some students were neutral or even negative when talked to about reading problems, 6 were transfer instructors. One transfer instructor with a demanding text said that none of the students he talked to admitted any problems with the text, but that 75 percent eventually dropped out.

It may well be that a student reading at 11th or 12th grade level might not have had problems with high school courses but, upon being faced with a college-level text, suddenly finds unaccustomed and confusing problems. This group, often overlooked, needs attention.

Question 5: How much value do instructors find in early identification and intervention?

Ten of twelve instructors said teachers should have this kind of information in order to learn early which students might have problems. One said he normally identifies the problem students only after they have begun the process of failing; if he can find them before they begin the process, perhaps the process can be avoided. Another said it was important to begin to build

the weak student's confidence immediately before he or she develops a defeated attitude.

Unanimously the instructors agreed that this project was not a waste of time for them. They were also unanimously in favor of requiring a reading test at time of entrance. One important spin-off that can be attributed, at least in part to this study, was the decision, shortly after the completion of the study, to implement a required reading test at the college!

Conclusions

Despite all that is currently written and discussed about skills problems, instructors tend to focus on their own disciplines and to be generally unaware of the reading level of their textbooks. The problems of poor readers are also foreign to them. They are, however, concerned about failure and attrition and are looking for solutions to reduce the failure in their classes.

Students with serious reading problems are aware of their problems, but readers qualifying as "low average," who may have succeeded in high schools but are having difficulty with college material, tend to deny there is a problem or to place the blame on external factors.

Giving instructors information and offers of assistance may be of some use, but does not appear to produce significant results in reducing attrition or failure if students are reading below text level. A more appropriate time to deal with the problem may be at the time that the student is choosing which classes to take. It seems evident that assessing for counseling, advising, and placement is essential at the community college.

To avoid confronting the student with a realistic assessment of his or her skills is a denial of the professional responsibility of the schools. It has resulted in classes being filled with underprepared students and with frustrated instructors being torn between diluting content or failing large numbers of students; it has resulted in students being awarded grades or even degrees that are devoid of real meaning; it has wasted valuable time and resources. For humanistic as well as practical reasons, we cannot continue such a practice. We recommend the following:

1. An assessment should be a part of every community college.
2. Campuswide skills assessment should be required for all entering students, day or evening, when they first enroll. This assessment must be presented in a positive way, as a service to assist students. A variety of additional tests should also be available at the students' option if they want further information about themselves.
3. Assessment should be followed by advisement by trained counselors and placement into appropriate skills courses. It is questionable that placement into a particular course should be mandatory, but establishment of skills prerequisites for classes needed for the A.A. or A.S. degrees would provide goals for the student and clear reasons to enter developmental courses.

4. A specific ladder of developmental courses in math and language arts should be available, with enough sections offered to accommodate high-risk students before they attempt more demanding courses.
5. Although the logistics are difficult, instructors need some kind of information about their high-risk students. Some colleges offer a histogram of reading scores for each class, which at least provides a class profile.
6. Each instructor should know the reading level of his or her text.
7. Instructors and staff development personnel on campus should work together to determine various ways that intervention and services can be appropriately provided to students who need extra assistance.
8. Staff development must be carefully thought out and offered in appropriate ways. Instructors care about being successful in their classrooms and respond well when change is internally motivated.

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IMPROVING LEARNING FROM TEXTS THROUGH FACULTY AND STUDENT DEVELOPMENT

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Background of the project

In 1980-81 a Chancellor's Office Innovative Teaching grant entitled "Improving Teaching and Learning from Texts in History and Philosophy Through Systematic Staff and Student Development" was funded on the commuter campus of California State University, Fullerton.[1] The purpose of the project was to develop (1) university professors' available repertoire of strategies for guiding students' independent learning from texts, and (2) students' facility in learning from texts with adjunct guide material in a mini-course setting.

The project was housed in the Undergraduate Reading Program which offers developmental (not remedial) reading courses in the areas of critical reading, vocabulary comprehension, rate and flexibility to university level undergraduate students. While working with both students and faculty from other disciplines the Reading faculty had seen the need for both student and staff development in the acquisition of information from textbooks and critical interpretation of content material. As early as 1977, joint conferences of the University of California and the California State University systems had discussed the need for content classroom teaching strategies and specially organized course and alternative instructional patterns to improve university students' reading skills.[6]

The project was developed, then, to facilitate learning from texts in content areas and to provide content area professors with the time and information necessary for the development and use of adjunct guide material that could be used in an adjunct critical reading course aligned with the content area class. Even though this project focused on the general education areas of History and Philosophy, the process is generalized to any academic area on any level of postsecondary education.

The two main components of the project were the development of adjunct

guide material and a one-unit adjunct critical reading course. The adjunct critical reading guide materials included such instructor-devised aides as selective reading guides, graphic organizers, concept outlines and vocabulary identification/relationship items. The one-unit reading course was developed for student use of the study guides and the acquisition of general text analysis strategies. The emphasis in the course was not only on explicit information from the text but also on interpretation and evaluation of the ideas and concepts presented in the text.

Adjunct guide material

Procedure for the development of the study guides. During the Fall, 1980, planning phase of the project, selected faculty from the Reading department and the History and Philosophy departments formed teams to analyze the textbooks in History 110A (Western Civilization) and Philosophy 100 (Introduction to Philosophy). This phase included not only a readability analysis but also a structural analysis of the ways in which information is presented in the text as different text structures require different adjunct guide materials reflecting those structures. For example, in the history textbook information was presented in a chronological or survey fashion while the philosophy text was more argumentative and informational in structure. In order to develop the guide material, the content area professor underlined the important concepts in the text and helped the reading instructors write some of the study guide items.

Elements of study guides. The adjunct study guides were designed to (1) guide a student through reading assignments in content area textbooks, and (2) to focus a reader's attention on the major ideas presented in a textbook. Adjunct guides attempt to develop the student's understanding of and ability to deal with levels of comprehension, organizational patterns of different texts and the specific skills these might require. Adjunct guides structure and guide the reading of the textbook material or students' post reading reasoning.[2,5]

After reading and analyzing the text the next step in the development of study guides is the selection of content to be emphasized. As mentioned before, the content area professor "highlighted" all major concepts in the text for the reading instructors. He selected the information that he considered most pertinent and that he wished to emphasize and marked the passages in the text. All adjunct guides developed reflected the concepts in these marked sections.

A variety of adjunct guide materials were constructed. These include Selective Reading Guides, Graphic Organizers, Concept Outlines, Vocabulary Identification and Vocabulary Analysis/Relationship guides. All of these are outlined below including the purpose, procedure for construction and a brief example for each type of adjunct study guide. The examples shown were designed for the history text, *A History of Western Society*.[3]

I. Selective Reading Guide

A. Purpose: To guide students to select ideas within a content text chapter and to teach students flexibility in their reading.

B. Procedure: (1) Identify important concepts in advance (content area instructor); (2) proceed section by section through the chapter indicating in written form each section's importance; include specific concepts to which the students should attend.

C. Example:

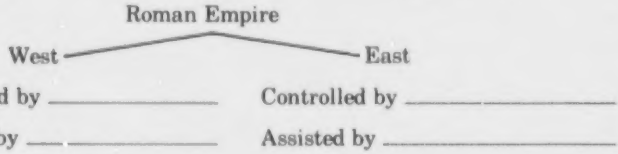
Pages 344-353 — Read this section on the Hundred Years' War quickly. Note primarily the appearance of Joan of Arc.

Pages 353-356 — Read carefuly about the rise of the English parliament. Think about the same development that did not occur in France.

II. Graphic Organizer

A. Purpose: To help students develop a sense of the structure of the concepts being studied; to aid them in perceiving the relationships which exist between concepts.

B. Procedure: (1) Determine which concepts should be emphasized and what relationships exist between specific terms (content area instructor); (2) Arrange words into a schema or diagram which depicts key relationships among the terms; (3) omit several of the terms, leaving blanks for the students to fill in the diagram.



III. Concept Outline

A. Purpose: To aid students in perceiving the relationships between concepts; to summarize events; to capsulize information.

B. Procedure: (1) identify which concepts and events should be emphasized and outlined (content area instructor); (2) provide skeletal outline of an important event; (3) direct students to fill in the outline.

C. Example:

Plebian Struggle with the Orders

I. Reasons for the Struggle:

II. Steps in the Struggle:

1. Plebian secession from the state:

a. reason:

b. result:

IV. Vocabulary: Identification

A. Purpose: To assist students in selecting important terms, dates, events, etc. and to locate them in context from the text chapter for greater reinforcement.

B. Procedure: (1) Select important terms from the text (determined by content area instructor); (2) indicate the page, column, and paragraph in which the term can be found in the text.

C. Example:

Hellas (41,1,1,)
polis (42,2,2)
Mycenaean (45,2,1)
Illiad and Odyssey (47,1,1)

V. Vocabulary: Relationships/Analysis

A. Purpose: To help students see relationships among the ideas presented and to begin to analyze the terms when appropriate based on common roots, etc.

B. Procedure: (1) Select important terms from the text (determined by the content area instructor); (2) have students match, put in chronological order, compare and contrast, etc. important terms and ideas.

C. Example:

What were the popular definitions for "liberty" and "equality" during this period? Were they synonymous? Why or why not?

Adjunct mini-course

As mentioned before, a second component of this project ws the development of an adjunct course to implement the use of these study guides. An existing one-unit reading course was retitled "Critical Reading in History (or Philosophy)" and was scheduled for 1½ hours per week for 10 weeks. It was held immediately after the content course taught by the professor who helped design the study guide so that there would be no loss of information from the lecture.

The purpose of this mini-course was to help students develop independent strategies in critically reading the text and to become active decision makers in integrating the information obtained from the lecture with that developed in the text and thus be able to anticipate and predict possible objective and subjective examination items. The emphasis for the reading instructor was *not* on teaching history content but on developing students' textual analysis and critical reading strategies. When students asked history content questions for which they could find no answer in the text, they were directed to ask the history professor at the next class session.

During the class the students worked in study groups reviewing and

discussing assigned study guide questions which had been developed for each text chapter. As the development of text extension activities and independent study strategies was a primary goal of the class, a study group leader was required for each group at each mini-class session. The concept of group leader was based on the successful model developed in one of the other reading program courses. Each week the study group leader for that week was responsible for developing an extension activity related to the chapter concepts in addition to leading a review of the material from the study guide assigned for that week. The students became quite creative with this part of the course structure as they developed time lines, objective tests, maps and even crossword puzzles as extension activities for their groups. It seems that after using instructor-devised models students can be quite successful in developing their own guide material.

Lastly, a regular part of the weekly course activities was the organization of information from the lecture and the text in a summary sheet format. This summary process also required that students predict possible examination items. The history professor did invite the adjunct mini-course instructors to preview the exams he had developed for History 110A and invited recommendations for clarification and revision of items as necessary. Interestingly enough, after reviewing the results of a particular history exam, the students in the reading mini-course asked for guidance in constructing essay questions. The reading instructors developed some essay models in consultation with the history professor for use within the structure of the mini-course.

Evaluation of the project

With the help of an external evaluator, Dr. Michael Mend, the students had an opportunity to evaluate both the adjunct study guide material and the adjunct mini-course structure. Students had positive perceptions of both the adjunct material and the course and showed a significantly more favorable attitude toward the history course, for example, than did their control group peers.[4] There is limited research as to the transfer effect of such student development activities in college reading — adjunct guide material and adjunct courses. Plans are underway for a follow-up study of this nature during the coming academic year related to this project.

Faculty development

The approach to staff development with content area / academic discipline faculty in this project was not that of the "expert" going to the "uninformed" but rather a more individual cooperative orientation in a variety of ways. Besides the obvious involvement of the individual content area faculty members in the project itself, one of the other ways of faculty development has been the extension of the project to another general education area built on the model designed with history and philosophy. As of this academic year,

adjunct guide materials and a mini-course have been designed for an introductory economics course.

Another way that reading faculty promoted faculty development was through a two hour seminar involving representatives of the Chancellor's Office, Cal-State University administration and faculty from the academic areas of History, Philosophy and Economics. At this time, the reading project staff provided an overview of the planning and implementation phases of the project and Dr. Michael Mend presented his external evaluation of the project. Seminar participants commented positively on the project after this presentation and made a number of written recommendations. Interestingly enough, one area of recommendations focused on the need to involve *more* students in the mini-courses.

Implications

Both student and faculty development are enhanced through such a project. Student development is facilitated through the aplication of text analysis and critical reading strategies aligned with their relevant coursework. This approach can be contrasted to the more traditional reading/study skills course that is more general in nature and not designed to correspond with any particular content. Faculty learn more about the unique reading process at the university level and about students' reading needs. And, they have an opportunity to participate in a process to develop guide material keyed to their own understanding of the content in the text they have chosen for their own classes.

This process can be generalized to any level of postsecondary education even without an outside funding source. It only requires a willingness on the part of reading / study skills professionals to communicate with other segments of a campus in a low-keyed non-obtrusive manner.

Lastly, if the "non-traditional" reading and study skills programs are going to survive in this day of limited financial resources, then these programs need to align themselves with the more "traditional" academic areas/ disciplines to ensure their own future growth and development.

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"LINEBACKING": ANOTHER LOOK AT ESSAY ORGANIZATION

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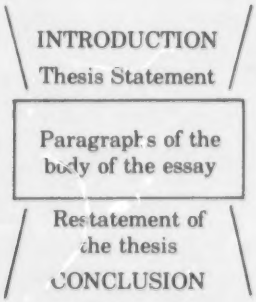
I really *am* asking you to "take another look" at essay organization. I know that you receive copies of writing texts with new approaches to the process, yet have little time for evaluation and perhaps little desire to risk a complete change from what currently works for you. We may well need to lean upon creative experiments to solve special problems. We have a continuing concern for the shape writing is in, and this shape — essay shape — is the subject of my "linebacking" presentation. Its design evolved from my students' need to "see," to make visible, the form their writing *takes*, and to find a way to line it up with a more idealized structure — the essay. What I offer is but a small part of the larger writing process, yet it has value for my remedial students.

All essays are written in class, and most are assigned "off the wall," as students say. Early in the course I give them "thinking" assignments, but by mid-semester students are writing on an unannounced topic every week. Linebacking is presented when students have been sensitized to, and are individually remediating, their problems in grammar, punctuation, spelling and usage. Students have written several essays following the familiar, many-schemed pattern:



However, it is difficult for these students to understand both the limiting and freeing character of the thesis statement, as well as the intrinsic form — beginning, middle, and end — of even the simplest sentence, of the paragraph, and of the essay. At mid-semester they have patiently worked to understand form and to mold their writings in the direction of the model. The linebacking process gives further help.

Class members are given an unedited student essay, assigned to groups, and asked to read and consider the organization of the writing. I have found both frequency of activity and variation of members to be helpful in establishing relaxed and fruitful group participation. Each cluster of students grapples with a particular part of the essay, as follows:

Group 1.

What is the thesis statement (or controlling idea) of the writing? What is the quality of the introduction: does it move from the general to the particular (the thesis), or narrow from "people" to the person writing? Is it smooth? Is it long enough, or could illustrations, examples, be added?

Group 2

What is the topic sentence of paragraph 1? (It may *not* be the first sentence, as it should be!) Do all sentences of the paragraph explain the controlling idea of the topic sentence? If not, can you add transition words, or combine sentences so they *will* support that idea? Are the sentences arranged according to some principle, for example, *time, least to most,* or *left to right?* (Assign a group to use this approach for each body paragraph — or for several short ones.)

Last Group

What is the first statement of the conclusion? Does it reflect the thesis, recapitulating in different words? Is there a brief summary of, or some allusion to the content of the essay? Does the closing sentence convey a sense of an end to the writing?

Before we begin, I reaffirm the worth of individual voice, reminding students that when a passage doesn't "sound good," the matter of voice and style are probably at issue, and that changing them is not the goal of this exercise. When group work is completed, the lineback is recorded as follows: each sentence of the essay is numbered, condensed, and written on the chalk board. Although I begin the process of condensing, the students continue it, thus reinforcing their perception of the controlling idea of each grammatical unit. Each group spokesperson then notes any need for revision, reordering, or expansion, as consecutive sentences are considered. The dynamism of discussion and challenge and "seeing" is apparent as these changes are recorded until we have a completed lineback and an improved organization scheme for a valuable piece of writing. This group-work close scrutiny results in strengthening the thesis and revealing the need to develop statements

more fully and accurately, in reordering ideas, and in confirming the concept of the essay.

I would like to share a recent lineback with you. The assignment was "Write an essay about what you think you will be like at the age of sixty-five. Consider such factors as your temperament, your family life-style and relationships, your expectations of self and others, your gifts and qualities." The essay which follows was chosen because it seemed to have a theme which was not clearly articulated, despite a basic energy and a sense of conviction. Several ideas were stated very briefly, and their ordering was not entirely logical. It seemed an ideal essay to lineback.

A Full Life

Society does not prepare people for aging. Sixty-five is a taboo number which means retiring from a job, receiving Social Security checks, and feeling alienation from society's younger generation. My parents' attitude toward aging is when the years begin to cripple them, the children will take on the responsibility to care for their needs. Older persons are to stay at home and quietly wither away. I am not well-prepared for having my sixty-fifth birthday, but my goal is living life to the fullest until then.

I am one who believes "you are as young as you feel." I have been fortunately blessed with two strong legs enabling me to run and enjoy active forms of sports. I believe in healthy foods for a healthy body. "You are what you eat." I definitely don't want to end up as a sixty-five year old chocolate candy bar. My legs may get a little stiff after ten miles, but my heart will still be pumping.

Getting older does not mean the end of one's life. On the contrary, it allows the chance of a new life filled with more love and joy. Being aware of age is a part of reality we must face, but dwelling on it wastes time. For example, my grandmother tells me she chooses to remember her age. She never thinks about growing old and that is the reason she is still going strong. My grandma wakes up at 6:00 o'clock every morning, washes the clothes, weeds the backyard, and prepares breakfast for the family.

My grandmother inspires me to live and also tells me to learn the most I can. I may become a little slower but I will certainly never retire from life. I will not end up in a retirement home being fed strained carrots and apple juice. I am a fighter and I will strive even then to live a full life.

Society fears age and all the effects of it. I prepare for sixty-five and live for every new day.

My students' changes, reflected in the lineback below, result from a degree of rhetorical sophistication gained from chapters 1-3 of our text, *Shaping College Writing*, by Joseph D. Gallo and Henry W. Rink, 3rd ed.,

Harcourt Brace Jovanovich, 1979, which emphasizes unity beneath the topic sentence and the cohering of material through transition, as well as from my semester-long emphasis upon the clarity and inclusive character of an excellent thesis statement.

Lineback of "A Full Life"

Introduction

1. People not prepared for aging.
2. 65 is taboo number: retirement, S.S. checks, alienation from those younger.

Omit word "taboo", replace "number" with "age."

3. Writer's parents expect children to care for them.
4. Older persons are to "wither away" at home.

Linkage: reverse 3 and 4 and begin with "Since..."

5. Writer not prepared for 65, but will live fully until then.

Revise and amplify thesis statement.

Paragraph I

"To accomplish this,"

6. Writer believes in feeling young to stay young.
7. She is strong; runs; enjoys active sports.

"So I will continue this attitude in the form of daily walking after the age of sixty-five."

8. Writer believes in healthy foods to stay strong.
9. "You are what you eat."

, because

Linkage

10. Does not want to be fat and unfit at 65.
11. May be stiff when running, but will still be alive.

Replace after sentence 7.

12. Getting older is not end of living.
13. Actually allows new life of more love and joy.
14. Awareness of aging is acceptance of reality; dwelling on it wastes time.
15. Example in grandmother, who chooses not to remember age.
16. Doesn't brood about growing old; reason for vitality.
17. Wakes at 6:00, works hard before cooking breakfast.

Paragraph 2

"having such experiences as becoming grandparents and traveling; doing such things as renewing visiting hobbies or beginning new ones."

new paragraph

"my life every day to the fullest"

18. G. inspires writer to live and learn.

"By then"

19. Writer may slow, but will not stop.
20. Will not live in retirement home, being spoon fed.
21. Will strive for full life.

Paragraph 3

"with the example of my grandmother's spirit, my belief in exercise and proper diet, I will live my life fully until retirement and beyond."

"nor wither away at my children's homes as my parents are expecting to do."

"Though"

22. Society fears effects of age.
23. Writer prepares for 65 and lives now for each day.

new paragraph

?

linkage

Some additional comments to the revisions noted above are illuminating. The thesis statement, "I am not well-prepared..." seems non-specific, and needs clarification. Also, the writer often refers to life after sixty-five, so "until then" is imprecise for the content of this essay. After discussion, it was clarified and enlarged. Although the above revisions represent simple solutions to problems, students saw that two paragraphs — on exercise and diet

— might be developed from paragraph 1. And while the conclusion seems clearly to begin with sentence 19, there was a need for a firm topic sentence above it to "echo" the thesis and conform to essay shape.

No presentation can well-convey the dynamics of process in outlining back from the "finished" essay to a concise representation of its shape, and thereby discovering its rhetorical flaws. But perhaps reading the essay again as it reflects the changes recommended will help you to "see" the value of linebacking.

A Full Life
(Revision)

Society does not prepare people for aging. Sixty-five is an age which means retiring from a job, receiving Social Security checks, and feeling alienation from society's younger generation. Since older persons are to stay home and quietly wither away, my parents' attitude toward aging is that when the years begin to cripple them, the children will take on the responsibility to care for their needs. Although "sweet sixteen," the voting age of eighteen, and the drinking age of twenty-one are regarded favorably by society, the retirement age of sixty-five is not, and so I am not anticipating that time. Even so, my goal is living to the fullest, all of my life.

To accomplish this, I am one who believes "you are as young as you feel." I have been fortunately blessed with two strong legs, enabling me to run and enjoy active forms of sports, so I will continue this attitude in the form of daily walking after the age of sixty-five. My legs may get a little stiff after ten miles, but my heart will still be pumping.

To feel young, I believe in eating healthy foods for a healthy body, because "you are what you eat." I definitely don't want to end up as a sixty-five-year-old chocolate candy bar.

Getting older does not mean the end of one's life. On the contrary, it allows the chance of a new life filled with more love and joy, having such experiences as becoming grandparents and traveling; doing such things as renewing rusting hobbies, or beginning new ones.

Being aware of age is part of reality which we must face, but dwelling on it wastes time. For example, my grandmother tells me she chooses not to remember her age. She never thinks about growing old and that is the reason she is still going strong. She wakes up at 6:00 o'clock every morning, washes the clothes, weeds the backyard, and prepares breakfast for the family. She inspires me to live my life every day to the fullest and tells me to learn the most I can.

With the example of my grandmother's spirit, my belief in exercise and proper diet, I will live my life fully until the age of retirement. By then I may have become a little slower, but I will certainly never retire from life. I will not end up in a retirement home being fed strained

carrots and apple juice, nor wither away at my children's homes as my parents are expecting to do. I am a fighter and I will strive even then to live a full life. Though society fears age and all the effects of it, I prepare for sixty-five and live for every new day.

ABSTRACT

LEARNING ASSISTANCE CENTERS: DON'T FORGET THE VO/TECH STUDENT

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During the Fall of 1981, Cerritos College surveyed the 107 community colleges throughout California to determine the kinds of reading / study skills services available to vocational / technical students. The survey was also designed to determine whether services differentiated between academically-oriented and vocationally-oriented students, and, if so, how.

The results showed that reading services are fairly prevalent, with reading programs and learning assistance centers present at 80% of the 80 colleges which responded to the survey. However, there is generally no distinction made between vocational and academic students when learning assistance is provided. Many campuses attempt to individualize the assistance given to all students, and several schools are in the process of developing vocationally-oriented reading or study skills courses.

The survey revealed a desire on the part of many schools to develop programs tailored to meet the needs of vocational students. With that in mind, the following recommendations can be made:

1. When setting up a reading program, be cognizant that the reading skills needed in vocational/technical areas differ from those of academic areas. Focus must be on following printed instructions; sequencing; understanding charts, graphs, and illustrations; comparisons; cause-and-effect relationships; and reference skills, especially cross-referencing and indexing. Vocabulary in context techniques should be stressed as well.
2. Utilize monies available through the federal Vocational Education Act, especially Subpart 2 and Subpart 4.
3. Work closely with vocational / technical instructors in identifying students who need reading / study skills assistance and in helping those students make smoother progress within content area classrooms.

DEVELOPING EDITING SKILLS IN ESL STUDENT WRITERS

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"Freedom from error is finally a matter of understanding error..."
— Mina Shaughnessy[2:128]

Student writers for whom English is a second language (ESL) often make more and different kinds of non-compositional errors (grammar, spelling, punctuation) than do native speakers. Since giving feedback on errors is considered a legitimate part of second language instruction, teachers typically spend considerable time correcting students' papers. The feedback systems they use vary: some teachers make editorial corrections themselves; others indicate the type of correction needed through editorial symbols, and some use a combination of both systems. The scope of correction also varies: some teachers give feedback on all errors; others focus feedback on only a few errors at a time. Regardless of the correction technique used, the instructional goal is the same — to alert the students to the types of errors they make so that they may do more of their own editing in subsequent papers.

Yet the tendency for the same types of errors to reappear again and again in a student's papers suggests that composition correction as it is often done may be teacher time poorly spent. Indeed, insights from research in adult second language acquisition suggest that we need to reexamine our assumptions about the effect of teacher correction on a student's ability to edit. Since many of the research findings are reflected in a theoretical model developed by Stephen Krashen[1], I will begin with a brief discussion of the significant features of Krashen's model which directly apply to the editing task.

The monitor model

According to Krashen's Monitor Model theory, adults have two distinct means of developing ability in a second language: subconscious language acquisition and conscious language learning. Acquisition, the more impor-

tant of the two, involves a subconscious creative construction process similar to that of a child learning his first or second language. Although acquirers may know no formal "rules" about the language, like native speakers they may self-correct on the basis of what "feels" right. Learning, on the other hand, involves conscious knowledge of grammatical rules. Unlike acquisition, learning is thought to benefit from error correction since it helps the learner arrive at linguistic generalizations. The role of conscious knowledge of the second language is limited, however; it is only available to the learner as a Monitor (i.e., editor) of utterences initiated through the acquired system. Since an understanding of the Monitor is central to the discussion, a closer look at this editing function is in order.

Krashen stipulates three conditions necessary for Monitor use: (1) adequate time, (2) focus on form (i.e., correctness) and (3) an easily-stated rule. Since writing allows more time than speech for reexamining the form of the message, it is more likely to be monitored. Yet, only when writers make a conscious effort to focus on the correctness of the written message are they likely to make changes. This explains why language students perform better on discrete-point grammar tests than their use of grammar in free writing would lead one to expect.

But the largest constraint on Monitor use is posed by Krashen's third precondition, the writer's knowing an easily-stated, applicable rule for the language feature under scrutiny. Consider the following: linguists have as yet described only part of the English language; applied linguists have written pedagogical rules for only a subset of the linguistic descriptions; teachers, in turn, are aware of only a subset of the pedagogical rules; and the student writer knows only a small portion of what the teacher knows. Thus, it is obvious that only a very small subset of the language is available for the student editor through the learned system. This point is highly significant in terms of teacher correction and student editing.

Teacher correction and student editing

Realistically, teachers can expect students to gain independent editing control over only a small proportion of their errors — those which can be accounted for by easily-stated rules. The remaining errors, then, can only be corrected through a subconscious "feel" for the correct language form. That is, feeling that an utterance is not quite right, learners must try to reinitiate the utterance through the acquired system, just as native speakers might, to obtain the preferred form. Their success in arriving at the preferred form is consequently dependent on their acquired proficiency in the language. For many ESL writers, their initial utterances do accurately reflect their acquired proficiency, so no need for change is felt, even though errors exist. Wholesale teacher correction of student errors may help the students strengthen their "feel" for what is correct in the language, assuming the students are required to mentally recycle this new input by recopying the

paper correctly and perhaps even reading the corrected text aloud several times. But the contribution of this correction approach to acquire proficiency is questionable and may only become evident in student writing after some time has passed.

If it is the teacher's intention to help students become independent editors of their papers and to do so within a restricted time frame, it is better for the teacher to rely on what the students already know about the language. Thus, the teacher should focus feedback only on those features of the language represented by easily-stated rules already taught. In this way the teacher offers the students a workable means of adjusting the accuracy of their writing. Realizing the differing impacts of wholesale error correction and selective feedback, the teacher is in a better position to make an appropriate pedagogical decision as to which form or correction to use.

For those teachers who choose to use selectively focused feedback as a means of strengthening students' editing skills, it may be helpful to clarify what is meant by an easily-stated rule. Although Krashen leaves it up to other applied linguists to develop the definitive list, he does give several examples: third person singular endings; subject-verb agreement; the "many"/"much" distinction. While waiting for Krashen's challenge to be met, teachers who choose to develop their own working list of language features accounted for by easily-stated rules should be cautioned to consider more than just the surface form of a particular grammatical item. For example, whereas third person singular ending qualifies as an easily-stated rule, not so easily accounted for is a construction like the passive voice. Although the surface form (*be* + past participle) is certainly straightforward enough, knowing when to use this verb form is not so simple. Thus, a teacher can successfully work with a student who already has a correct "feel" for when to use the passive voice even though he does not always mark the past participle constituent correctly (perhaps using only the simple form of the verb after *be*). But little will be gained by focusing on the passive voice if the student is not already aware of when it is rhetorically appropriate.

In addition to directing attention only to language features which meet the easy-rule criterion, teachers interested in developing the editing skills of their student writers need to be sure that their lessons provide specific opportunities for student editing. Students who are still involved in adequately expressing their intended message in a given moment — i.e., who are still in the communication process — cannot be expected, on command, to direct their full attention to the mere correctness of the form. Hence, the initial drafting of ideas and subsequent revision of a paragraph or paper should be completed before the student is asked to edit for non-compositional errors. Also, if the teacher is to get a truly accurate picture of the student's ability to edit his own writing, time devoted specifically to student editing should be scheduled. Although this last point may appear obvious, many teachers waste valuable time giving feedback on writing which the student has not edited.

Finally, if a teacher is to succeed in helping a student bring non-compositional errors under control, the student needs to be given a goal which is within reach. By grouping a student's individual errors into categories (i.e., subject-verb agreement; internal sentence punctuation, specifically commas; sentence final punctuation; parallel structure; article use; etc.) what initially appears to be an impossible situation can suddenly seem manageable. For example, a student who typically makes somewhere around twenty errors in a hundred word paper may find that the errors actually fall into only four basic categories. Choosing the category with the most errors, as long as it is governed by easy-to-remember rules, will yield the most gain and thus should be the initial focus of the student's attention in editing. Focus on a restricted set of selected language forms will bring the editing task within reach of the student. The teacher, in turn, provides feedback only on the student's attempts to edit for errors that fall within the selected category. Thus, the editing task becomes more manageable for the teacher as well as for the student.

Unfortunately, focused attention alone is not sufficient to build and maintain a student's independent editing skills. Teachers who have used a focused correction approach often find that once they shift the editing focus to a different language feature, the incidence of error in the use of a feature previously attended to increases. The explanation for this is simple: once the teacher directs her attention away from one language feature to another, so does the student. Therefore, it is essential for the student to gain independent editing skills which can be maintained even after the teacher's feedback support is shifted or removed. This can be achieved only through a feedback system which trains students to be less teacher dependent.

An editing training sequence

In the course of teaching intermediate and advanced writing to ESL students, I have developed a systematic approach to helping students gain and maintain independent editing control over selected language forms. The success of this approach rests in gradually withdrawing teacher feedback further from the immediate error. There are four phases in the complete sequence, although the teacher may skip phases in response to the student's growing ability to edit.

Phase I. In Phase I, the student submits a paper which he has already edited for teacher feedback. The teacher simply highlights all instances of the featured error with a light-colored highlight marker and returns the paper for student correction and recopying. As the instances of error of the specified type diminish in subsequent papers, the teacher begins to remove her feedback further from the targeted error, a process carried out in Phases II-IV.

Phase II. In Phase II, the teacher simply makes a highlight dot in the margin of the line in which an error appears, one dot for each error in that line of text. The student then is required to locate the error, make the appropriate

correction, recopy the paper and resubmit it for verification.

Phase III. In Phase III, the teacher merely indicates at the bottom of the page the number of instances of the given type of error occurring in the paper. The student then reedits the paper, attempting to locate and correct all of the errors indicated by the instructor before resubmitting it.

Phase IV. Once the student has demonstrated accuracy in editing for the desired form, the teacher responds to occasional lapses on subsequent papers by simply instructing the student to check the paper for correct use of the target item. The specific location of the error is not referred to in any way.

Other supportive procedures

The training sequence begins once the teacher, in consultation with the student, has selected the language form or forms for editing. But before beginning the process, it is essential to verify that the student already "knows" the appropriate rules, although not necessarily in a textbook sense. The reason for this is obvious: if the students do not know the appropriate rule governing a selected language feature, they cannot be expected to use it in editing their papers.

But knowing the appropriate rule is only part of what is involved in self-correction. An equally difficult task involves isolating the corresponding grammatical constituent from the larger text in order to examine it for accuracy. One helpful aid is suggested by the fact, long recognized by teachers, that students manipulate grammatical forms more accurately in discrete item tests requiring them to fill in a blank than they do in their own writing. Requiring students, therefore, to underline all instances of the relevant grammatical forms appearing in their writing helps facilitate their checking for correctness. Thus, a student working on subject-verb agreement would be required to underline the subject and verb in every sentence for a while as an aid in focusing on the appropriate grammatical units. Without this ability to separate figure from ground, students are unlikely to be able to apply their knowledge of appropriate rules.

A useful way to plot student progress, and thus strengthen morale and motivation, is to obtain writing samples before beginning the training process and periodically throughout the writing course. (The samples can also be used to select language features for editing training.) To obtain samples, allow the students to write on a topic and to edit their papers independent of assistance; providing a time interval between the initial writing and the editing phase may provide the most accurate picture of a student's monitoring abilities. Then, a ballpark figure representing a student's written accuracy can be obtained by dividing the number of words written without error by the total number of words written: i.e.,

$$\frac{\text{Total number of words without error}}{\text{Total number of words written}} = \%\text{ of writing which is accurate.}$$

For example, if a student wrote one hundred words and made twenty errors (including punctuation mistakes), the accuracy figure would be calculated on the basis of eighty words written without error; i.e., 80/100 = 80% accuracy.

Once an intial accuracy figure is calculated, a student can be given a reasonable goal to strive for, depending on his knowledge of the language and the final criteria of the course. For example, a student who is writing at 80% accuracy at the beginning of the course can be asked to strive for 90% accuracy or better (10 errors per 100 words) by the end. Accuracy figures can be calculated at intervals throughout the course to quantify progress.

Conclusion

The approach presented here for developing editing skills in ESL student writers can be used within the context of any writing course. It is also appropriate for learning assistance centers and other student tutorial programs where the primary focus is on helping individual students strengthen their basic skills. Developed with ESL students in mind, it is equally suitable for basic writing students, once fundamental grammatical concepts are established.

The strength of the editing training approach is that it provides a specific means of helping students strengthen control over their writing. In the words of Mina Shaughnessy[2:17], "the teacher must encourage an aggressive attitude toward error and then provide a strategy for its defeat, one that allows the student to count his victories as he goes and thereby grows in confidence." Editing training focused on selective language forms does just that.

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USING BLOOM'S TAXONOMY FOR PRECISION PLANNING AND CREATIVE TEACHING IN THE DEVELOPMENTAL MATH CLASSROOM

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In the developmental math classroom, the instructor as well as the student may feel "math anxiety." The instructor's anxiety, often having to do with preparing well-designed math lessons, can be alleviated by the instructor's using Bloom's Taxonomy to help with lesson planning.

Before looking at a method of applying this Taxonomy directly to math lessons, let's consider its background.

Reviewing the history of the taxonomy

In 1948 when Benjamin Bloom and fellow college examiners formed the idea for the now famous educational classification system, little did they realize how profound an impact they would make on the entire educational process. What has finally come to be known as Bloom's Taxonomy of Educational Objectives is a system for stating educational objectives that requires a plan of purposeful specific activities, reduces vagueness, provides a set of common terms, and improves communication among educators.

Formerly educators spoke of student mastery of subject skills in vague terms such as the following: I want my students to "really understand," "grasp the core or essence," and singly, "comprehend."[1:1] In speaking in such abstruse terms, curricula and test designers could not be sure whether teachers meant that students should be able to recall the bare facts or whether students were expected to be able to evaluate the basic principles upon which the learning was based. Bloom and his colleagues decided that it was necessary to articulate precise levels of mastery from the least complex form of learning, "knowledge," to the most complex, "evaluation."

According to Bloom, the establishment of such a taxonomy, in which "the process of thinking about educational objectives, defining them, and relating them to teaching and testing procedures"[2:5] could become an externally valuable tool for educators.

The final result was a classification system consisting of six steps and three domains. The six steps, arranged in hierarchical order, (from the lowest

to the most complex level of learning), consisted of the following in the cognitive domain: (1) Knowledge, (2) Comprehension, (3) Application, (4) Analysis, (5) Synthesis, and (6) Evaluation.

Using the taxonomy, educators could intelligently design course curricula and follow through with tests measuring those outcomes because the specific level of mastery desired (the stated behavioral objective) could be articulated. Although originally designed to aid communication among test makers, the taxonomy could serve as a resource for classroom teachers and test designers.

Applying the taxonomy to math

In effect, Bloom's Taxonomy not only offers clarity in communicating objectives but also precision in lesson planning and intellectual development — especially appropriate in the remedial/developmental math classroom. If any group of students needs a carefully designed structure of progressively difficult learning activities, the developmental student needs it. Usually such students have an intense fear of math based on feelings of incompetence in basic computation, understanding math word problems, or in general, anything having to do with mathematics. Increasingly math instructors are becoming aware of such problems regarding their students, and the term math anxiety is being used to describe such mental blocks. According to Crawford, math anxiety is the manifestation of "the frustration, confusion and tension often associated with attempting math...a severe and pervading problem."[3:18] In addition to the anxieties he suffers in math, the developmental math student has anxieties associated with his being able to gain access into regular college credit math classes. To be a part of the mainstream is often one of his major goals. Therefore, the instructor's utilization of Bloom's taxonomy would assist this student in gaining confidence and would aid him in progressively reducing his feeling of anxiety about math. In addition, the taxonomy provides the structure for the instructor of developmental math to articulate with precision the behavioral objectives he wants exhibited by the classroom activities he wants to use in order to achieve these objectives.

Because the emphasis in this article is based on lesson planning and classroom activities for cognitive or skills development, the descriptions of the affective and psychomotor domains have been omitted.

Using the taxonomy for lesson planning and creative teaching

The instructor of mathematics can utilize a specially designed chart (see Table 1) for planning various lessons within a given topic. This form would also provide a description of the specific lesson activities accompanying each lesson.

For example, the instructor might begin a lesson on the quadratic formula by asking the class what it means to solve an equation or how one goes

TABLE 1

Topic: Solving Quadratic Equations Using the Quadratic Formula

1. Knowledge. Knows the meaning of solving an equation. Knows the statement of the quadratic formula. Knows how to check an answer.	Instructor leads class discussion on the meaning of solving an equation and checking answers. The quadratic formula is stated.
2. Comprehension. Understands quadratic formula applies only to equations in quadratic form: $ax^2 + bx + c = 0$ Properly identifies the coefficients a, b and c in a given problem. Can justify the quadratic formula by solving $ax^2 + bc + c = 0$ by completing the square.	Class discusses correspondence of general form $x^2 + bx + c = 0$ to specific examples of quadratic equations. Instructor derives the quadratic formula allowing students to supply justification at each step. Class is split into small groups of 3 or 4 students. Instructor gives class a problem. Students work individually, exchange papers within their group and critique solutions.
3. Application. Can apply this method of solving quadratic equations to word problems. Can use quadratic formula to determine x intercepts of equation of the form $y = ax^2 + bx + c$. Can use the quadratic formula to solve other types of algebraic equations, i.e., rational equations, radical equat ons, etc.	Each small group is given a word problem to work collectively. Each group sends a representative to the board to present their problems with complete explanation. Instructor illustrates other equations that give use to quadratic equations. Students work radical equations and rational equations on a handout.
4. Analysis. Recognizes the necessity of standard form. Recognizes the relationships between the degree of the polynomial and the number of roots of the polynomial equation. Recognizes the relationship between the roots and the factors.	During instructor-led discussion key relationships among powers, roots and factors are examined. Students in small groups analyze word problems to construct the quadratic equation and determine the most efficient and effective means of solution.

Predicts the nature of the roots. Analyzes a word problem that gives rise to a quadratic equation. Analyzes a given quadratic equation to determine the most direct method of solution: factoring, completing the square or formula. Analyzes an equation in quadratic form in order to apply the quadratic formula.

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5. Synthesis.

   Use quadratic formula to solve other equations in quadratic form such as

   $2 \sin^2\theta - \sin\theta - 1 = 0$

   $\left(\frac{x}{x+1}\right)^2 + 5\left(\frac{x}{x+1}\right) + 4 = 0$

   $x^4 + 2x^2 + 3 = 0$, etc.

   Suggests ways to use the quadratic formula in systems of non linear equations.

Each small group is given a different problem involving an equation in quadratic formula. After an instructor-led discussion, involving some examples, each group works collectively on its problem. A spokesman from the group presents the problem on the board with explanation.

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6. Evaluation.

   Judges the validity of a method and appropriateness of solutions when using quadratic formula to solve word problems. Can interpret answers in light of the problem. Can compare and contrast the value of different methods of solution for a given quadratic equation. Can estimate and interpret irrational solutions. Can interpret imaginary solutions. Can discriminate between solutions and extraneous solutions.

Class and instructor critiques each group presentation (word problems and general quadratic forms) according to validity and elegance of method, appropriateness of answer, and interpretations of results and information.

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about checking answers. The quadratic formula is stated and the students are asked to memorize it. This represents the lowest level of learning involving only knowledge of the basic facts.

For the next step, Comprehension, the class would come to an understanding of the correspondence between the general quadratic equation in standard form, $ax^2 + bx + c = 0$, and specific examples of quadratic equations provided by the instructor. A lecture-discussion format might be used here.

The instructor could provide further insight into the quadratic formula by deriving it from standard form by completing the square. The instructor would facilitate discussion after each step of the derivation by asking the class to provide the justification.

After this, the class could be split into small groups of three or four students. The instructor would then give the class a quadratic equation to solve and students would work individually within their group. After a few minutes, papers are exchanged within the group, the correct answer is given and students are allowed to discuss and critique their solutions.

After the students have had sufficient practice solving specific quadratic equations, they are ready to apply the knowledge and skills in solving word problems. The instructor would give each group a different word problem involving a quadratic equation. Members of the group would work collectively on their problem and a spokesman for the group would be chosen to present the problem to the class. Word problems might involve applications of quadratic equations to areas of geometric figures, paths of projectiles, etc.

Also, in an instructor-led discussion, the teacher may show how this technique for solving quadratic equations could be useful in solving other types of equations (rational equations, radical equations) that give rise to quadratic equations. Additional work could be given on a handout which would allow students to solve these types of equations individually.

As the instructor develops the quadratic formula and shows its many applications, he encourages analytic thinking by pointing out certain key relationships among the powers, factors and solutions. For example, if a quadratic equation factors, it has at most two distinct factors, hence it may have no more than two distinct solutions. Analyzing details in this manner, the students are led to their first glimpse of the Factor Theorem, i.e. $x = a$ is a root of $P(x) = 0$ if and only if $(x - a)$ is a factor of $P(x)$. Also relationships among the sum and difference of roots and the coefficients of the quadratic equation might be examined.

Furthermore, in the small group activity of solving word problems, a good deal of analytical thinking is occurring in utilizing the information to construct an equation. Students may have at their disposal other methods for solving a quadratic equation. They must analyze each equation to determine the best approach to use.

Frequently, students complain that they forget previous math lessons in their anxiety to comprehend the new lessons. Synthesis, the fifth category of the taxonomy, allows the instructor to integrate newly learned techniques of

solving quadratic equations using the quadratic formula, examples might be generalized to include other equations in quadratic form. After an instructor-led discussion involving a few examples, each small group would again be given a problem to solve. Each question would give students the opportunity to synthesize previously learned algebraic techniques with the quadratic formula to equations in quadratic form. A spokesman from each group presents the problem at the board with an explanation.

The sixth step, Evaluation, is used upon completion of each problem. Methods of solution are examined and judged on the basis of their validity and elegance and answers on their appropriateness. Mathematical precision is stressed. Students interpret their answers in light of the questions and disregard extraneous solutions. Hence, evaluation occurs on a personal level and in class discussion at the conclusion of small group activities.

Summary

Bloom's Taxonomy can be used as a guide for precision in lesson planning and for creative, classroom activity in that it enables instructors to move the developmental math student from the basic level of learning (knowledge) to more complex intellectual tasks (analysis, synthesis, and evaluation). Since each step of the taxonomy precisely describes the behavioral objectives of that step and provides a base of learning for the next higher-level step, instructors can use the taxonomy in planning their sequence of lessons and the student-directed activities as board work, student-to-student recitation and discussion, small group work, and study-buddy sessions — all offer opportunities for students to apply what they have learned on each of the six steps of the taxonomy. The productive experience gained by students through the careful, comprehensive planning suggested by Bloom's method offers hope of swifter transit to those struggling to enter the educational mainstream.

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STRUCTURED, INDIVIDUALIZED COMPOSITION: A PROGRAM MODEL

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Competency in writing is developed by writing, just as reading is by reading. However, just as endlessly reading first grade material will not develop proficiency at a higher level, so writing must be controlled by the writer if it is to improve. To help gain this control a few long essays are not so productive as a series of several shorter assignments, and structure within such writing is essential. Teachers of composition are only too aware of the difficulty of dealing with papers which are either "constipated" or exhibit "sprawl." Adequate structure averts these problems to a marked degree.

In addition to structure, the need for more time with students individually is widely recognized. Papers written at home (if, indeed, they *are* written by the students and not by friends or relatives), turned in, marked, graded, and returned, are often unsatisfactory learning experiences, especially for the under-prepared. They frequently do not understand the correction symbols, and, if they do, are not certain what should be done to improve the writing. And what composition teacher hasn't encountered assignments that would require more writing than the original compositions if organization, support, and logic were adequately commented upon? And which of these teachers has not heartily (and, at times, desperately) yearned for relief from the stacks of papers to be read in their "free" time? Fortunately, individual student conferences in lieu of such evaluation solves the problem for both students and teachers. The major difficulty has been a really practical method for implementing such a program. Heretofore there has been a shortage of materials that offer assignments which encourage creativity but require *thinking* as well as *feeling* (which combination produces original, unified, and developed paragraphs), while at the same time allowing for individualized attention.

The program

A recent program newly available commercially called *Paragraphs: 14 Lessons for Individual or Group Writing*[1] has these characteristics. Physi-

cally, *Paragraphs* consists of a master set which includes a loose-leaf binder containing a detailed instruction sheet, a cassette lesson (approximately five minutes), and an outline format tailored to each of fourteen lessons. The fourteen writing assignments include the following rhetorical forms: Classification, Examples and Illustration, Personification, Comparison, Contrast, Objective Description, Process, Narration, Setting, Alternatives, Irony, Characterization, Analogy, and Defining by Elimination.

In addition, there is supplementary material related to transition, order, and topic sentences, plus a list of over one hundred possible topics. The "cassette summaries" provided for instructors and/or tutors make it possible to review the material on the cassettes without taking valuable time to listen to each one, and these summaries include, printed in boldface, all topics suggested. Full reproduction rights are granted for one department in the school of purchase, since it is intended that copies of the materials contained in the master set be made available for student use.

A program model

The following is a description of the use of this program by one professor at Cypress College in California, although many variations have been used successfully in other classes. The particular program to be described consists of writing experience for the lowest level students — those not ready for the pre-transfer remedial course. (The use of *Paragraphs* has worked equally well, however, for unusually bright students; the difference simply lies in both quantity and quality of writing produced.) These particular classes meet for writing two hours per week (as part of a block including two hours of reading as well) for a semester in a room equipped with cassette players and a variety of resource materials (including books, workbooks, programmed texts, and cassette/workbook programs). Assignments in supplementary materials are made individually on the basis of need and relevance to the student after some writing has been completed and assessed.

At the beginning of the semester all students are introduced to the program by the instructor. Each student is given an instruction sheet and an outline format for the first assignment, Personification, and is requested to look the pages over without reading the student samples. Then the cassette recording for the Personification paragraph is played aloud for the entire class, after which the students are told to read the sample paragraphs. After sufficient time has elapsed that all students should have read at least the first sample, the instructor discusses the outline format, emphasizing the fact that the ideas included for consideration are not necessarily all suitable for every subject, and that the order will probably need to be changed, according to the sense of the topic chosen. Students are then told to begin by deciding upon a topic and filling in the outline. When the instructor okays the outline, the actual writing of the paragraph begins. All of this introduction should not take more than half an hour.

At this point the students are in a state of shock, not believing that such an assignment could be expected of them. After allowing such discussion for just a few minutes, the instructor advises the class that they can listen to the tape again individually if they wish to do so, but otherwise they should begin thinking and writing. And, interestingly enough, that is what they do. Very few listen again to the tape, at least the first day, although some will want to hear it again at the following class session, and, happily, it is also available for any absentees when they return to class.

Some teachers would also be in a state of shock if they thought they had to assign such a paragraph to poor writers at the beginning of the semester. But because of the adequacy of both the instructions given and the suggestions in the outline format, students not only do well on the assignment, but also generally enjoy it very much. At the same time the students are given free reign to use their imaginations, so that they feel comfortable with what they are doing and the reader has the added bonus of a set of "fun" papers. Thus this paragraph gets the class off to a good start, which is in itself something of a feat with writers afraid of paper and pen! (In addition, the Irony paragraph, another early assignment, is handled amazingly well by even poor writers who seem to enjoy exercising a sense of humor.)

A due date is suggested, but since abilities vary in a typical class, some will finish much before the others, and slower workers are given whatever class time they require. The instructor is available during the writing to check outlines and help in any way necessary. Because all begin at the same time on this first paragraph, this is the only writing done for the semester that clusters sufficiently for the teacher to read some of the papers outside of class, although *all* writing is discussed with students individually *in class* before it is returned. The pre-reading simply expedites the in-class discussion and provides information about the writers' strengths and weaknesses.

As previously mentioned, these first papers are submitted within a shorter period than subsequent ones, which means that they cannot all be read immediately. Therefore the instructor quickly glances over the papers to determine whether or not there are any glaring mechanical problems; if not, the students are assigned another paragraph to write by being given another instruction sheet, outline format, and cassette lesson. These assignments will not be the same for each student; one may be assigned Comparison, another Contrast, and another Characterization. (Some students may need more imaginative types of paragraphs at first rather than the expository types. There are advantages, as well, in that not so many copies of cassettes are necessary if assignments vary, and reading is more interesting if there is some variety.) If the student needs help with such common problems as avoiding comma splices, run-ons, sentence fragments, et cetera, a supplementary assignment is given that must be completed before the next writing is done. Almost all students fall in this second category. It is at this point that the class routine settles in to its permanent form.

Students are now working independently, either on compositions or

skills necessary to improve their writing. As a paragraph is turned in, the instructor reads it immediately with the student whenever possible, making suggestions for improvement. (Obviously these can be as detailed or general as the teacher deems advisable.) The paper is returned to the student at the time of the conference, and is revised. The process is repeated with the revision, or revisions, until such time as the final draft is complete, with proper margins, done in ink or typed. It is very satisfying to students to see their work in polished form. Individual student folders contain the outline, the first draft, the revision(s), and the final copy stapled together of all work throughout the semester. The end results are quite impressive.

If, at times, too many compositions are completed to be read immediately, the instructor assigns either supplemental work or an additional paragraph so that the students have useful tasks. The papers then are evaluated with the students just as soon as possible.

In these classes, completion of five paragraphs in final form is required for a grade of *C*, seven for a *B*, and nine for an *A*.

Variations

Other instructors using the same materials utilize them differently, which is one of the decided advantages. Some use the cassette instructions for absentees only, keeping the classes together as far as assignments are concerned, and giving all instructions personally. Others use the cassette aloud in class, again pacing all students together. Some, especially those working with more capable students, don't use the cassette or verbal instructions at all, relying entirely upon the use of the instruction sheet and outline.

This self-directive material has been used satisfactorily in situations other than the classroom where individualized compositions are produced, such as writing labs, learning assistance centers, tutorial centers, et cetera.

Whatever the introductory approach, one of the pleasantly surprising features of these fourteen assignments is that even the most remedial writer will produce a paragraph recognizable as being of the specific rhetorical form assigned, without any teacher intervention. The depth of structure gives students confronted with writing assignments some place to go. These lessons provide a limited form to work within and suggestions to help students reach for appropriate material from their own experiences.

(For answers to questions or for further information, please write: Mary H. Wortham, Box 256, Groveland, CA 95321, or call 209-962-7560.)

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HELPING MATH/SCIENCE STUDENTS WHEN YOU ARE NOT A MATH/SCIENCE PERSON YOURSELF

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Most of us who work in learning assistance centers had our own academic training in the humanities or in the social sciences rather than in the sciences. We majored in English or history or took a degree in counseling psychology. We did not take degrees in chemistry or physics or math. Yet many of our student clients at the learning assistance center need help in just those areas. How can we respond?

This paper presents two answers. The first is a test-taking skills workshop for students who are performing poorly in math and science courses. The workshop was designed by a person with a Ph.D. in English and training in study skills; it uses peer tutors to help teach in the content areas. The second answer is "conceptual blockbusting," a method a study skills teacher with a humanities background can use to teach problem-solving techniques which are helpful to all students, but especially to those in engineering, math, chemistry and physics.

A workshop that meets a need beyond the instructor's reach

Often we can do with the help of others what we can't do by ourselves. For example, a humanist whose knowledge of mathematics and science reaches only as far as algebra, geometry, and geology (one college year, required) can successfully lead a workshop entitled "Test-Taking for Minority Students in Basic Math and Science Courses." Here was a group of students with a disproportionate share of low grades in basic science courses (so identified by an analysis of grades given in several key courses the previous spring quarter). Part of these students' trouble lay in weak math skills. Here also was a Learning Assistance Center staffed mainly by humanists like the one described above. How to address the problem? In this case, the key to our workshop's success lay in combining the skills of a humanist with expertise in learning assistance with the skills of peer tutors with expertise in math and science.

The workshop was set up for ten students. It was led by the study skills instructor and five tutors. The study skills instructor gave four workshop sessions: on general study skills, on specific test-taking strategies, on methods of reducing test anxiety, and on ways to learn from finished (and graded) tests. Each tutor was responsible for helping two students through a particular test in a university course. The tutors attended the workshop sessions along with their tutees and then met outside the workshop with their tutees — both individually and as small groups — to help them learn to apply general study skills concepts to specific studying situations.

The four workshop sessions led by the study skills instructor lasted one hour each. The first, the general study skills session, covered time management, test preparation and prediction, and mapping. Students were asked to schedule their study time for a particular "target" test; to check the nature of the test with the instructor; to write out a course "table of contents," following a text or syllabus or lecture notes; and to map detailed study sheets of key topics. Handouts from our "Effective Learning Skills" course helped them to carry out these activities.

The second workshop session dealt with test-taking strategies. It had two parts. One covered basic methods, such as reading the whole test, planning time, and boxing key words and underlying qualifiers in directions and problems. The second dealt with methodical problem solving: isolating the problem, listing the givens and the unknowns, checking the units, and drawing a picture of the problem. Here a graduate student teaching assistant familiar with George Polya's *How to Solve It* carried the class and introduced Polya's method (with, of course, a handout for the students).

In the third workshop session, the test anxiety session, students practiced relaxation techniques (breathing, movement, imaging). They also discussed thoughts that cause problems (for example, "My high school didn't prepare me for college.") The instructor gave out a list of common thoughts like these to aid the discussion.

The final workshop session was designed to help students learn how to learn from a finished (and graded) test. Students brought one of their own tests to the workshop and, in the company of a tutor, analyzed and tabulated the errors. Again, a handout simplified the task. (This one was based on a checklist in Nancy V. Wood's *College Reading and Study Skills*.) Some tutors also brought their own graded tests to their sessions with their tutees, and going over these proved enlightening. Outside the workshop, each student (accompanied, preferably, by a tutor), further discussed his or her own test with the course instructor or teaching assistant, focusing on how to overcome in the future the kinds of errors previously noted.

Students found all parts of the workshop helpful, but this last session had some special virtues. It broke new ground in that most of the students were not in the habit of discussing finished tests with anyone. The tabulation of errors encouraged students to approach the test rationally and objectively. This attitude, in turn, helped to make their subsequent discussion with the

course instructor or teaching assistant comfortable and profitable.

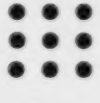
New habits are slow to develop. But a workshop like this, led by a humanist trained in study skills and supported by peer tutors knowledgeable in math and science, can help to reinforce students' best academic behavior and can help also to show students how to begin to manage challenging tests — even when the problems to be solved lie somewhat beyond the experience of the workshop leader.

Conceptual blockbusting

Most, if not all, of our students at Stanford possess excellent verbal, analytical, and quantitative skills. Yet, from time to time, many of them run into roadblocks which inhibit their problem-solving abilities. *Conceptual Blockbusting*, by James L. Adams of the Stanford University School of Engineering, helps students become better problem solvers by helping them conceptualize more freely. In our study skills classes, we have had success helping students get "unstuck," by teaching Adams' techniques. What follows is a mixture of our own opinion and experiences blended freely with ideas adapted from Jim Adams.

The best way to teach students about different kinds of blocks is to have them solve problems which illustrate the kinds of traps or difficulties they might encounter when attacking a particular type of problem. In this kind of experiential learning one student may not solve the problem; he is stuck. But another student may provide a clue or partial solution and show the first student how to get unstuck. In *Conceptual Blockbusting*, Adams identifies four types of blocks to effective problem solving: perceptual blocks, emotional blocks, cultural and environmental blocks, and intellectual and expressive blocks. He describes the unique characteristics of each type of block and gives hints on how to bust it.

The first type is perceptual blocks. Adams[1:13] defines perceptual blocks as "obstacles that prevent the problem solver from clearly perceiving either the problem itself or the information needed to solve the problem." Some of the more common perceptual blocks are seeing what you expect to see, having difficulty isolating the problem, or tending to delimit the problem too closely. Consider the following problem:



Draw four straight lines (without lifting the pencil from the paper) which will cross through all nine dots.[1:18]

You will have difficulty solving this problem unless you can expand or exceed some imaginary boundaries you are likely to place on the problem. (Some

solutions to the problems in this section appear in the text and others appear in the Appendix.)

The second type of block is emotional. Adams says that a primary emotional block to conceptualization is feeling "like an ass."[1:49] We are inhibited by the prospect of putting out a new idea because in doing so we may expose some imperfection in ourselves. When we are caught up in emotional blocks we fear taking risks, we prefer to judge ideas rather than to generate them, and we cannot give ideas time to hatch — we cannot "sleep on it." Adams gives a humorous example to illustrate this point. In class he tells students they are chickens, goats, pigs, cows and other barnyard animals. He asks each student to start making the noise of one of these animals. And then he sits back and watches the students' inhibition and embarassment.

Adams[1:31] calls the third group of blocks cultural and environmental blocks. We acquire these blocks, he says, through exposure to a given set of cultural patterns and values. A typical cultural block is the conviction that fantasy is a waste of time. Another example is that humor does not belong in problem solving. And a third is that reason is good and intuition bad. Environmental blocks can be bothersome interrupters, like the telephone, for example, or deep-seated problems like lack of support for new ideas (for example, an extremely conservative administration or lack of funds for research and development).

Consider the following problem[1:32]:

> Assume that a steel pipe is imbedded in the concrete floor of a bare room. The inside diameter is .06" larger than the diameter of a ping-pong ball (1.50") that is resting gently at the bottom of the pipe. You are one of a group of six people in the room, along with the following objects: 100' of clothesline; a carpenter's hammer; a chisel; a box of Wheaties; a file; a wire coat hanger; a monkey wrench; a light bulb. List as many ways you can think of (in five minutes) to get the ball out of the pipe without damaging the ball, tube, or floor.

You probably came up with several ways to remove the ball from the pipe. Did you think of urinating into the pipe? Probably not, since urinating is a closed-door activity. Perhaps you had a cultural block!

The last set of blocks are intellectual and expressive blocks. Adams[1:43] tells us that "Intellectual blocks result in an inefficient choice of mental tactics" and "Expressive blocks inhibit your... ability to communicate ideas — not only to others, but to yourself as well." The most typical blocks are these: (1) use of an incorrect language — verbal, mathematical, visual — i.e., you try to solve a problem mathematically when you could solve it more easily visually; (2) inflexible problem solving strategies — that is, you try it one way, get stuck, and then quit; and (3) lack of correct information.

Consider the following example[1:4]:

> One morning, exactly at sunrise, a Buddhist monk began to climb a

tall mountain. A narrow path, no more than a foot or two wide, spiraled around the mountain to a glittering temple at the summit. The monk ascended at varying rates of speed, stopping many times along the way to rest and eat dried fruit he carried with him. He reached the temple shortly before sunset. After several days of fasting and meditation he began his journey back along the same path, starting at sunrise and again walking at variable speeds with many pauses along the way. His average speed descending was, of course, greater than his average climbing speed. Prove that there is *a spot* along the path that the monk will occupy on both trips at precisely the same time of day.

What language did you use to solve this problem? Did you use a picture? Did you talk it out (verbalize)? Did you use math? Most importantly, did you try several strategies? If you chose visual imagery, you probably solved the problem. If you chose a verbal solution, you probably did not solve the problem. To see the answer, graph the monk's journeys along the lines of space and time. Or, even more simply, picture two monks, one walking up (starting at sunrise) and one walking down (starting at sunrise). The place where they collide is the spot; the time when they collide is the time. (See Appendix.)

Consider the next problem[1:65]:

> A man and a woman standing side by side begin walking so that their right feet hit the ground at the same time and in the same place. The woman takes three steps for each two steps of the man. How many steps does the man take before their left feet reach the ground (at the same time and place)?

What language did you choose? Verbalization will probably not work. If you play a musical instrument, you probably can "tap out" a solution, but you will have a difficult time convincing someone who cannot hear your solution. This problem is a good one to solve with visual thinking. A mathematical solution will work, too. Students should ask themselves, "Was I stuck?" and, "Did I change languages to get unstuck?" (The answer, by the way, is never.)

Finally consider this problem[1:63-64]

> Picture a large piece of paper, the thickness of this page. In your imagination, fold it once (now having two layers), fold it once more (now having four layers) and continue folding it over upon itself 50 times. How thick is the 50-times-folded paper?

If you tried to solve this problem verbally or visually, you probably did not succeed. If you are familiar with doubling problems, you know the answer is surprisingly large. The best language for this problem is mathematics. (For the solution see number seven below.)

Conceptual Blockbusting provides many other provocative puzzles which

help students — especially those in math and the sciences — conceptualize more freely. Many solutions rely on approaching the problem in a slightly different way, that is, on breaking through one of the conceptual blocks described below. In class we find it effective to begin "conceptual block-busting" by having students go through the process of solving real problems in novel ways. Then, at the end of these exercises, we give students a summary of tips on problem-solving. Here is that summary:

1. *Problem solving is a process.* Keep your goal in mind and work through the problem in steps or stages. If you can't reach your goal from one starting point, begin again with another. Above all, don't expect to solve any complex problems in one shot.
2. *Read your problem aloud.* Give yourself a chance to *hear* it as well as see it.
3. *List the attributes of the problem.* What is given in the problem? What is unknown? What are you looking for? In what units will you express your answer?
4. *Look at the problem from more than one perspective.* Suppose you are an engineer and your assignment is to design a tomato picker. Is your *problem* to develop a gentle machine? Or a tougher tomato? Write down different ways to define or describe your problem.
5. *Expand the boundaries of the problem.* Often, we define or delimit problems too narrowly. Think of the "dots" problem. The ground rules ask you to connect all the dots by drawing four straight lines without lifting the pencil from the paper. What *don't* the rules limit? The length of the lines, for one thing. To solve the problem you need to make the most of this opening the rules give you, for you can easily connect the dots if you vary the length of the lines.
6. *Use all available sensory inputs.* Think of the "monk" problem and the "steps" problem. In the first, if you "see" two monks, one going up the mountain and one coming down, you can easily solve the problem. You can even hold it in your mind ready to draw on a graph. Likewise, the "steps" problem is easier to solve if you draw the footsteps. Many problems will yield if you shift from verbal thinking to sensory thinking — in these examples, to *visual* thinking. If you can, *draw* a picture of the problem.
7. *Think of visual, verbal, and mathematical notation as alternative "thinking languages," and be flexible in your use of these languages.* Think of the "paper folding" problem. It looks like a problem to be solved visually. But if you note that the number of folds called for equals 2^{50} (or about 1,100,000,000,000,000), you may quickly calculate that the thickness will be immense (some 50,000,000 miles) however thin the paper.
8. *If you get stuck on a problem, make lists.* List approaches you make to the problem. List different ways of defining the problem. List ideal solutions. List the variables. List the attributes. Keep a list of approaches you have

tried or steps you have taken.

9. *Many problems call for incubation.* To "sleep on it" may be a necessary step in solving a problem. Give your mind time to work. Verbal problems may sound altogether different after you have let them rest for a while.
10. *Many problems yield to "left-handed" thinking.* Try humor, fantasy, feeling, intuition, metaphor and imagery to solve a problem. Try "crazy" brainstorming with a friend or two to get your imagination going.

Now you have it. Most learning assistance centers have subject area tutors who can team up with a study skills instructor to give a test-taking workshop for students having difficulty in basic math and science courses. And Jim Adams' book *Conceptual Blockbusting* is readily available. These suggestions, then, are easy to implement. And they offer practical approaches to the solution of a common problem: how to help math/science students who come into the learning assistance center when you are not a math/science person yourself.

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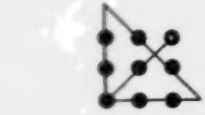
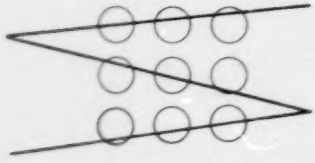
APPENDIX

Solutions to the problems from *Conceptual Blockbusting*

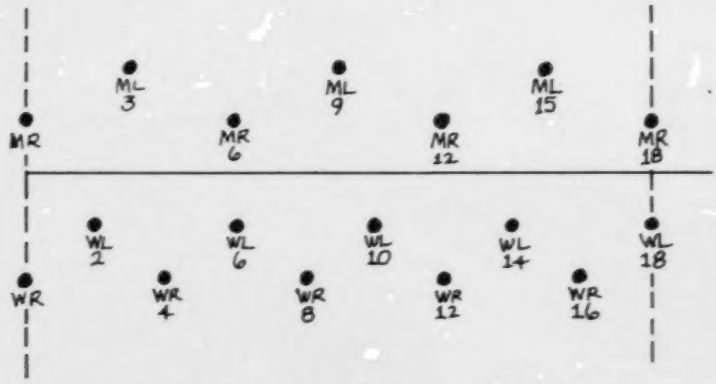
1. The "Dots" problem.



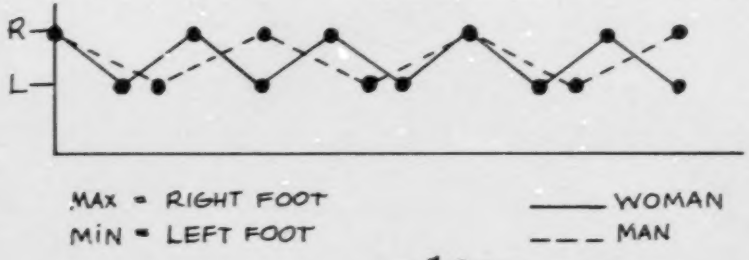


2. The "Monk" problem.

3. The "Foot" problem.



(Note: The pattern is repeated, and the left feet still do not touch simultaneously. The left feet never do touch at the same place and time.)



VOCABULARY DEVELOPMENT FOR COLLEGE ESL STUDENTS

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University of Washington

Students for whom English is a second language often encounter many academic problems in college. For some, textbooks are difficult to read, lectures and discussions are hard to follow, and essays are grueling. Although many are adept at reasoning and logic, ESL students often lack a certain facility in their use of English. One factor which contributes to this problem is their limited knowledge of the vocabulary of academic discourse. This situation, and what ESL instructors can do about it, is the subject of this paper.

Population

The ESL population in most colleges is a diverse group. Some are foreign students planning to return to their native country; others are immigrants or refugees who intend to remain in the United States permanently, and others are native-born bilingual students. The ESL instruction on campuses is equally varied. Beginning, Intermediate, Transitional, Advanced, and Intensive courses can be found in many institutions.

This paper is primarily concerned with the vocabulary problems of immigrant, refugee and native-born ESL students at the intermediate level or above. These students are enrolled in college and fully intend to enter into and complete degree programs. Many of these students are taking ESL courses (either credit or non-credit) that are "feeders" for regular freshman English classes. On larger campuses, these students are often in developmental programs such as HEOP, EOP, or SSDS.

Most students and instructors recognize the importance of a good vocabulary. In fact the two weaknesses many students perceive and unashamedly admit to are a slow reading rate and a poor vocabulary. Further, tests which measure a student's vocabulary are routinely used as part of admission and placement procedures. Dale writes, "A systematic program of

vocabulary development is not an 'extra.' Indeed, vocabulary development is conceptual development — a basic aim of any school or college."[1] Stotsky argues that, although students might have trouble understanding a passage even if they know what all the words mean, "understanding is clearly limited without knowledge of the meaning of most words. Developing vocabulary is thus a high instructional priority."[8] Clearly then, vocabulary development must receive considerable attention in courses designed for college ESL students.

Vocabulary problems and their causes

Helping college ESL students develop a strong vocabulary is a complex task. The difficulty arises from three major causes. First, little attention to vocabulary is given in the early stages of ESL instruction. Second, students in college are under the restraints and pressure of time. And third, problems inherent in the language make the rapid acquisition of a large number of words difficult. Each of these factors needs to be examined more closely.

A large number of college ESL students, especially those who have attended American high schools, have had considerable experience in ESL programs. Unfortunately, work on vocabulary development is often limited in these beginning and intermediate classes, whether taught in high school or college. Judd observes:

> Vocabulary has been relegated to secondary status in favor of syntax ....It is felt that students need to master basic grammatical patterns first to gain both understanding and ability to communicate in English. Learning new words or phrases is often viewed as a hindrance to this task because such study distracts the learner from observing and using the syntactic patterns of the language.[3]

The amount of time which should be devoted to vocabulary development in the earlier stages remains controversial; however, the inattention has created clear problems for college students. Fox maintains that we do students harm by working so long with simplified structures and simplified vocabulary. Once in college, these students "are actually far from being able to read unsimplified English which they are expected to read. The gap between the academic English they are now expected to understand and the simplified English they have been taught is too great."[2]

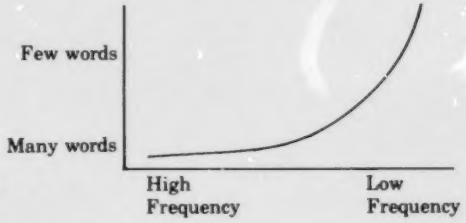
In short, college students need to be able to read "unsimplified English." This is the vocabulary of academic discourse, the "language of mature expository prose, or the formal English of college level textbooks."[8]

This "gap" problem is exacerbated by the restraints and pressures of time. No longer do students, or for that matter instructors, have the luxury of working with words slowly and carefully. Knowing a word in its fullest sense (understanding it in reading and listening and using it in writing and speaking) can rarely be accomplished in a limited amount of time. Students,

quite understandably, are concerned about getting on with the business of earning a degree and cannot or choose not to spend their time studying vocabulary. Furthermore, students in ESL courses are often concurrently registered in other courses, many of which require considerable amounts of textbook and supplemental reading, and institutional policies on core curriculum and distribution requirements make the wholesale avoidance of classes with heavy reading demands very difficult, if not impossible. If students are to survive in the academic setting, the gap between what they know (their limited vocabulary) and what they need to know (the vocabulary of academic discourse) must be narrowed. Thus, the rapid acquisition of vocabulary and vocabulary skills is critical at this level.

These two problems are compounded by two other problems inherent in the language. The first is polysemy, or the quite common phenomena of one word having multiple meanings. For example, "We gave the singer a hand when she finished" and "We gave our friends a hand when they moved." Students familiar with the language make the adjustment in their understanding of the meanings of *hand* quickly. It has been my experience, however, that if a word is not familiar to many ESL students, their attention is drawn away from the context of the word and drawn toward their bilingual dictionary. This makes the understanding of multiple meanings more difficult. The first error the student has made is to remove the word from its context and expect that the word will retain a clear meaning; the second error is to attempt to define it in terms from their native language. Two relevant points from structural linguistics apply here: (1) the same word can have very different meanings depending on the linguistic and social context into which it is placed, and (2) no word in any language has an exact equivalent in any other language.[4] Inattention to these two basic principles creates many problems for ESL students.

A second aspect of the language which hinders vocabulary development is the frequency with which words appear. Simply stated, very few words occur frequently; most words occur infrequently. The distribution graphed looks like this:[10:68]



This graph sheds more light on Fox's gap problem discussed earlier. Students who know simplified English are familiar with most high frequency

words, but they know only a limited number of low frequency words. In college, they are suddenly expected to become familiar with a considerable number of low frequency words. This immediately creates the instructional problem of which low frequency words to teach. Unfortunately, Twaddell writes:

> It is a sheer impossibility to teach the learner what he will need to know for the next page he will read or the next sixty seconds of lecture or conversation he will hear. If we try to prepare him in advance for specific vocabulary needs for any reading or listening, we are sure to fail, and he is sure to be frustrated and discouraged.[10:70]

And so, with regard to vocabulary, here is where we often find ourselves in the college ESL classroom: students have poor vocabularies because little attention was paid to the topic in their prior ESL classes; they need to rapidly acquire the vocabulary of academic discourse if they are to be successful students; their reliance on bilingual dictionaries hinders their progress; and no one can accurately anticipate which low frequency words students need to know. There are no simple solutions to these four interrelated problems, but certain classroom practices can at least begin to correct the difficulties.

Instructional solutions

The first and most obvious step is to devote considerable attention to vocabulary development in the college ESL classroom. Given the restraints of time, primary emphasis should be placed on receptive vocabulary (writing and speaking). Although we cannot predict precisely which low frequency words to stress, we do know the general goal is the development of the vocabulary of academic discourse. This unsimplified English tends to be filled with multisyllabic and Latinate words; hence, the study of affixes, roots and derivatives is most appropriate. This particular approach is frequently discussed in both ESL and reading literature and is widely used in the classroom. Stotsky's observations typify this general acceptance: "The grouping of derivatives or cognates and the teaching of prefixes and suffixes, and selected roots can be among the most effective techniques for helping students expand their knowledge and use of literate words."[8]

This approach helps college students get around the problem of the great number of low frequency words. A prominent feature of such words is that they are often "built" from the same root; thus studying one root gives clues to the meaning of many words.

Although helpful, the study of roots and affixes does not mean students will be able to handle unsimplified English. They will continue to encounter many unknown low frequency words. So the second aspect of instruction in vocabulary development must be some attention to making reasonable guesses at unknown words. This, of course, is getting meaning from a word's

context, a common characteristic of mature readers. Two aspects of this skill are particularly germane to ESL instruction. First, students often like to have clean, crisp definitions for unknown words. This is what drives them to the dictionary so quickly. Care must be taken to redirect their attention to the reading matter at hand: to the word itself, its role in the sentence or paragraph, as well as its relationship to the larger unit of discourse. Second, students must learn to tolerate a temporary vagueness about the word. This means they need to define the word in its broadest terms, narrowing the meaning only to the point where it makes sense in context. For example, consider the following sentence: "No one liked the *curmudgeon* who lived in the corner house." A student can easily guess that a curmudgeon is a person who probably does things others dislike. That is a vague definition, but it fits the sense of the sentence. The student who accepts that vagueness and continues reading is further ahead than the one who had to choose between "Geizhals, Knicker or Filz" in her German/English dictionary, or the one who found "hombre tacano" in his Spanish / English, or for that matter, the one who found "a cantankerous person" in an English dictionary. Twaddell points out that the acceptance of this vagueness is critical for readers:

> By the time we have encountered a word often enough, the accumulated exclusions have subtracted enough from the vagueness, and the associations of the word with its meanings have become increasingly precise. (If we never encounter the word again after meeting it once, the original vagueness from that first and only sensible guess will never harm us.)....It is our conscious and unconscious toleration of some vagueness in our successful guessing that makes it possible for us to expand our vocabularies.[10:72-73]

These two actions, making a reasonable guess at a word's meaning and temporarily accepting a vague definition for it, are two important skills which we need to develop in ESL students.

Finally, vocabulary should be presented in as rich a context as possible. Students should have the opportunity to see the word repeatedly and in a variety of contexts; they should have a chance to develop patterns of association for different terms; they should understand the word in both its literal and figurative senses. Ideally, they should begin to use the new words in both speaking and writing.

The obvious problem with the last goal is that it runs counter to the first, namely, the rapid acquisition of vocabulary. Whereas the first emphasizes the quantity of words to be known, the latter stresses the quality of the student's knowledge of individual words. Given the restraints and demands placed on this ESL population, the first goal is of primary importance. The final goal, although desirable, should be relegated to a secondary status, except in those classes devoted exclusively to composition.

Summary

For a number of reasons, many students in college ESL courses have a poor vocabulary. Since a solid understanding of many words is important to success in college, ESL instruction at this level must devote a substantial portion of the curriculum to direct vocabulary development. Three basic goals should be established for vocabulary instruction at this level:

1. The rapid acquisition of the vocabulary of academic discourse. Accomplishing this is aided by the study of affixes, roots and derivatives.
2. The development of two reading skills: making reasonable guesses at a word's meaning and temporarily accepting vague definitions for words during reading.
3. The presentation of words in as rich a context as possible, given the limitations of time. Through this, students begin to sense the qualities and limits of individual words.

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ABSTRACT

VOCATIONAL ARTS VOCABULARY

James Kindle
Columbia College

The Vocational Arts Vocabulary Program consists of five illustrated modules which are designed to meet the needs of disadvantaged, re-entry, ESL, and traditional students. The modules provide independent instruction in the special vocabulary needs for vocational programs, and for general education courses which are required for vocational students.

The modules are designed for use in the independent study format of the Learning Skills Center. They are traditional workbooks in which students do a variety of exercises and take self-correcting tests. The five modules are:

1. *Technical Arts:* Heavy Equipment, Fire Science, and Forestry Technology concepts and vocabulary.
2. *Business:* Vocabulary and concepts from Business, Real Estate, and Hospitality Management.
3. *Physical Sciences:* Chemistry, Physics, Math, Earth Science, and Astronomy.
4. *Natural Sciences:* Biology, Health, Natural Resources, and Anatomy.
5. *Social Sciences:* History, Sociology, Psychology, Political Science, and Anthropology.

A major advantage of this vocabulary program is its close correlation with course material in the vocational programs. Students can study words and concepts that are used regularly in the textbooks and lectures of their required courses. The program is also valuable in providing preparation for and familiarity with the course work of general education courses — such as history, math, science, and government — which vocational students often take in order to satisfy graduation requirements.

The goals of the vocabulary program are:

1. To help students to accomplish career goals by removing the barrier of poor vocabulary skills.

2. To help students gain the skill and confidence needed to be successful in their programs.
3. To assess student abilities by offering an informal testing procedure in the specialized vocabularies.
4. To provide a tool that will make it easier for a teacher to teach his or her program.

USE OF PEER PARAPROFESSIONALS TO DIAGNOSE AND TEACH READING/STUDY SKILLS

Margaret Anne Langer, Douglas B. Smith,
Kathy Linan, and Cheryl Capra
University of the Pacific

Employing peer student advisors can be an effective means of providing reading and study skills instruction to college students. Information from a fellow student is often regarded as more credible and acceptable than that received from a professional staff or faculty member. Paraprofessional services are also cost efficient in today's climate of tight budgets. One successful program using student advisors has been implemented at the University of the Pacific, Stockton, California.

The activities described in this paper represent only one component of a broad based paraprofessional program. Student Advisors at the University of the Pacific assist their peers with academic advising, share information on student life at Pacific, and offer personal counseling as well as providing reading and study skills diagnosis and instruction. The program is the result of careful screening, comprehensive training, and consistent supervision. This paper will look first at the reading and study skills services student advisors deliver and then at the administration of the total program.

The services

Student Advisors administer and interpret tests, provide group instruction and offer one-on-one counseling to students in a variety of study skill areas. Their activities begin with a two and one-half day New Student Orientation which is held during the summer.

Each Student Advisor meets with new students, in groups of about twelve, during orientation. At this time the Student Advisors administer a reading and study skills screening test. Preliminary scores from the test, along with admissions profiles, give the Student Advisors an indication of the type of class load each student may be able to handle. This facilitates academic advising regarding specific courses students might enroll in at registration, which is held at the end of orientation.

In addition to testing, the advisors lead six hours of group discussions, termed "Survival Orientations," which are designed to make entering students aware of the need to develop their own style of effective studying. The small group approach facilitates the development of a trust relationship and forms the basis for a follow-through program during the remainder of the academic year.

Advisors use a variety of processes to cover study skills content. One typical technique is to create a simulated study situation and then discuss the students' reactions and ideas about these situations. Several topics — Time Management, Study Systems for Reading, Notetaking, Test-Taking — are covered. However, creating a positive attitude in new students towards the responsibilities they will be facing and establishing recognition of the student advisor as a future resource person are more important than covering all possible areas.

Shortly after students arrive back on campus for the fall, the Student Advisor invites each one in for an individual interpretation of the reading and study skills test. The student's profile is charted, and areas of possible strength and weakness are explored. A discussion follows which focuses on whether the advisee feels this test was an accurate reflection of his or her abilities, and a determination is made as to whether the advisee is interested in any kind of program for self-improvement. If so, a specific area is selected to work on, possible activities for improvement are discussed and a contract (written or verbal) is made, specifying goals, activities, and a date for follow-up.

Reading and Study Skills problems may not be apparent from the initial screening, and some advisees may not be ready to admit problems at this time. Therefore, each student advisor continues to maintain contact with his or her advisees during the academic year. The student advisors keep regular office hours in the Student Advising Center in order to be available to all students who drop in or have made appointments. In addition, each Student Advisor develops an individual program of outreach which may involve letters, phone calls, gatherings and personal visits. As full-fledged contracted paraprofessional employees of the University, Student Advisors have access to those student academic records needed to perform their helping function. They also expend considerable effort in reaching out to students who encounter difficulty, such as being placed on academic probation. Success of the program is reflected in the fact that 92% of new students voluntarily utilize the services of the Student Advising Center.

While student advisors are trained to provide effective supportive services to students who have unrealistic initial expectations of the demands of college life, or do not know how to study effectively, they are not trained to provide services to students who are seriously deficient in basic reading and writing skills. Those students are referred directly to the University's Academic Skills Center for more comprehensive diagnosis and remediation. The Center provides both organized classes and individual instruction, tai-

lored to specific needs, for any student within the university who wishes to improve learning skills. Selected Student Advisors work as Teaching Assistants in the Center, assisting with planning and implementation of class sessions and providing individual study skills counseling.

Administration

The effectiveness of UOP's paraprofessional program depends on a comprehensive selection process, inservice training and program administration.

Student applicants are screened for their academic adjustment, effective personal study skills, ability to relate with others and potential for developing effective counseling skills. The selection process involves two interview sessions which enable the staff to observe and evaluate each applicant's group interaction skills, expressive and receptive communication skills, and the individual's motivation, values, and understanding of the program. Selected students are invited to register for a semester-long (2-unit credit) training class and thus become student advisors in training. Following successful completion of the course, the trainees are finally contracted to become student advisors.

The student advisor training course includes content on group process, teaching methodology, and counseling skills as well as reading and study skills diagnosis and instruction. The central theme undergirding all content is the "helping circle," which consists of five stages: careful listening, identifying problem(s), contracting, following through, and evaluating. A variety of instructional modes are employed: mini-lecture, discussion, small group activities, case studies, simulations, and role playing.

The course is coordinated by a Student Advisor and is team taught by many professional staff and faculty members who interact with the program throughout the year. The reading and study skills component, for example, is taught by the Director of the Academic Skills Center. This shared responsibility for the training gives the professional staff confidence in the abilities of the Student Advisors and provides a foundation for the close interaction between the professional and the paraprofessional staff that exists on campus.

Student Advisors continue their training on the job by participating in monthly inservice workshops to reinforce and refine skills. Individual support and supervision sessions held monthly with the Director or Coordinator of the Student Advising Program allow each student advisor to discuss personal concerns and offer feedback about the program. As paraprofessionals, student advisors are responsible for consistently maintaining program standards and expectations, such as confidentiality, follow-through on contacts with advisees, respect for their own limitations, and appropriate referral when necessary.

Future growth

The University of the Pacific's Student Advising Program continues to face new challenges. Some student advisors underestimate their capacity to deal with reading and study skills problems and have a tendency to over-refer. Some are unwilling to recommend alternative strategies with which they themselves are not comfortable. Continued monitoring of issues such as these has enabled the program staff to identify new goals for strengthening preservice and inservice training.

UOP's group of concerned, caring peer helpers reaches out to many students who might otherwise be neglected. The program is dynamic and growing as new services are identified and implemented. Use of paraprofessionals has expanded the ability of the University to work towards the ultimate goal of helping each student realize his or her full academic potential.

ESL: INTEGRATION OF ENGLISH, READING AND SPEECH

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Overview

The English as a Second Language (ESL) curriculum at El Paso Community College evolved over several years, culminating in the offering of the Basic Competence Programs for Fall of 1979, and the Bilingual Equivalency Option Program in the Fall of 1980. Currently there are over 2500 enrollments in these two programs. This translates into over 800 students. The Basic Competence Program was designed around twelve courses: eight ESL English courses and four ESL Reading courses. The Bilingual Equivalency Option program was built around four courses: two ESL English courses, one ESL Reading course and one ESL Speech course.

After students take the ESL Diagnostic Placement Test, they are placed into the level which will benefit them the most. They are able to take a full load of ESL courses, so they are studying English for three hours every day. This semi-intensive approach yields excellent language development. The English as a Second Language curriculum at El Paso Community College focuses on the four communication skills: speaking, listening, reading, and writing.

Complementing the program's strong curriculum foundation is the scheduling process. Two key factors were considered when marketing the program: location and time. Every effort was made to offer the programs at convenient locations, realizing that transportation poses a problem for some students. Scheduling most day courses between 9:00 a.m. and 2:00 p.m. helps accommodate the many students who need to get children off to school in the morning and be home when children are released from school in the afternoon. This time frame was also convenient for students riding city buses. Night classes begin at 5:30 and end at 9:30, Monday through Thursday evenings.

With respect to the attrition rate in the ESL program, slightly less than 20% of the students enrolled in the Basic Competence program fail to com-

plete the semester. Reasons for students dropping or being withdrawn include getting a job, change in work schedule, conflict at home, transportation, failure to apply oneself and poor attendance. Of the students who do finish the semester, 90% receive a grade of C or better. The 10% who receive a grade lower than C are encouraged to repeat the level. The introduction of a non-punitive, no credit, progress grade in the Fall of 1982 will support the efforts to recycle students, without having to assign them the stigma of a failing grade. The ESL Program is competency based. Realizing that students do not master language development competencies at the same rate, the recycling effort is an important component of the program. The attrition rate for the reading track is slightly over 10%. Approximately 90% of the students who complete the reading track earn a grade of C or better.

The attrition rate for students enrolled in the Bilingual Equivalency Option is close to 25%. This percentage can be compared to a 40% rate in English 3110 (equivalent to level 5) and 30% in English 3111 (equivalent to level 6). Students enrolling in English 3112 following completion of level 6 compete well with monolingual English students who have matriculated through the normal freshman English program (English 3110 and 3111), and in some cases have a higher skill level.

Currently five full-time ESL English instructors, five full-time Reading instructors and two full-time Spanish instructors teach in the ESL program as well as twenty-five part-time ESL English instructors and eighteen part-time Reading instructors. Full-time instructors are required to possess a Masters degree, preferably in applied linguistics, while most part-time instructors also possess Masters degrees.

English as a Second Language classroom instruction is supported by two fully equipped language labs. Although students are not required to spend time in the lab on their own, 70% of the students do utilize the lab facilities. Each class spends roughly one hour per week in the lab. A reading lab is also available.

ESL English

El Paso Community College's English as a Second Language Basic Competence Program has as its goal the students' recognition and accurate generation of the basic structures of the English language. These basic structures include the basic sentence types, the tense system, both simple and continuous, active and passive; and the basic phonology and morphology of the language.

The program was designed to recognize and to take into account the following conditions of learning. First, there is learner aptitude, which we have found requires approximately four semesters to achieve basic competence given the student's state of preparation. Secondly, learner effort and perseverance is required, which often proves surprising for these students. Thirdly, individualized quality instruction has concentrated on developing

sequentially the four skill areas of listening, speaking, reading, and writing. Finally, the opportunity for learning is afforded. Given the three preceding factors, reinforcement and repetition were built into the program recognizing that language use is a system of symbolic habits which needs to be established and which must constantly counter and overcome first language interferences.

This, then, is the rationale for the program. The Basic Competence Program itself consists of four levels, with three tracks. The levels reflect a progression in language acquisition according to difficulty and complexity. The tracks reflect our appraisal of the students' learning needs and modalities. The first track, called Practice and Analysis, emphasizes an analytical focus on the structures of English: parts of speech, tenses, English word order, etc. The second track, Integrated Skills, has an emphasis on listening, speaking, reading, and writing through repetition, drills, dialogues, etc. This track provides an "unconscious" reinforcement of the structures analyzed in the first track. Finally, track three is a reading track which recognizes the vital importance of reading for the students.

The second program in the English as a Second Language Curricula is the two semester bilingual equivalency option. It consists of four classes: two English composition classes, a reading class, and a speech class. English 4110 and Reading 4105, when taken concurrently, are equivalent to English 3110, Freshman English, Part One, the expository paragraph. English 4111 and Speech 4101, when taken concurrently, are equivalent to English 3111, Freshman English, Part Two, the expository theme. Because some of the students are still struggling with Academic English, these English courses are intended to meet the needs of the bilingual student who has achieved an advanced degree of basic language competence while still requiring further development in the areas of English rhetoric, vocabulary acquisition at the college level, and creative writing skills. The reading course provides college level skills. The speech course provides a much needed individualized emphasis on pronunciation and effective oral communication.

ESL reading

The ESL Reading courses began primarily because many students with limited English ability were enrolling in Basic Reading and Study Skills courses. These courses proved to be very difficult for these students. The curriculum initially included one ESL Reading course; however this was inadequate because the students were at many levels with different abilities. In conjunction with the ESL discipline the current four level, three track curriculum was developed.

The Reading courses are competency-based. Each student is pre-tested and post-tested using the Nelson Reading Test. Students must gain a minimum of two years in reading level in each course and be reading at the exit level in order to proceed to the next course.

The ESL Reading classes both complement and supplement the ESL courses. With the Reading course, each student receives three hours of English instruction per day. In addition, the ESL Reading courses emphasize skills which are not covered in the English classes. The skills are organized sequentially and include vocabulary and comprehension skills as well as spelling, summarizing and outlining. The students also receive individualized instruction in the Reading Lab.

The Bilingual Equivalency Option Reading class stresses vocabulary development, sentence and paragraph analysis, main idea, supporting details, context clues, stems and affixes, making inferences and judgments, and comprehending unsimplified prose, fiction and nonfiction. Students must be reading at grade seven when they enter the course and strive to attain tenth grade reading level upon completing the course.

ESL speech

The ESL Speech course is linguistically based, recognizing that the study of language is systematic, naturally affected by its context, and required in every major activity in which humans are engaged. The course is humanistic and centers on the individual's growth through change that is generated internally from the students' responsibility, ambition, and desire for fulfillment; and externally through varied interpersonal interactions in the class sessions.

Three major objectives have been identified for the ESL Speech course:

1. To develop the student's acquisition of the vocabulary and oral style necessary for effective oral communication.
2. To train the student to research, analyze, organize and deliver effectively structured oral messages.
3. To provide non-threatening experiences, exercises, lessons, role play situations, and related activities that rely on student performance for the development of oral skills.

Speech 4101 is one of two courses required in Level VI of the ESL Bilingual Equivalency Option for Freshman English. The course is taken concurrently with English 4111, and is structurally integrated into the ESL Bilingual Option Program.

The course provides integration of the language skills of writing, reading, speaking and listening, which are involved in the experiences of gathering and giving information. Review and practice with variations of word selection, sentence types, paragraphing techniques, and organizational methods provide the student with an awareness of a variety of options available for each communication experience.

Speech 4101 integrates Reading, English, and Speech through the development of analytical thought processes. The result is the logical development and structuring of messages. Learning activities focus on developing an

awareness of communication concepts, adapting learned facts from other classes, acquiring practical communication skills for conducting business in English, and the oral presentation of expository and persuasive messages.

Conclusion

The English as a Second Language programs at El Paso Community College are based on sound instructional methods. The success of the programs, measured in the competencies achieved by students exiting, as well as enrollment figures, suggests a stable language development curriculum. The program's success has been further bolstered by two factors: (1) an instructional design that integrates English, Reading and Speech into language acquisition, and (2) a marketing strategy that places a high priority on scheduling which meets student needs. As semi-intensive language development training, the Basic Competence and Bilingual Option Programs are superior models.

THE LEARNER AS TEACHER: HOW TO MANAGE IT

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The goal of educators is to produce independent learners: students who are capable of assimilating, analyzing, synthesizing, and applying available information to meet the demands of not only academic and scholastic work but functional, or life pursuits, as well. As stated by Singer and Donlan[12:239], "teaching means showing students how to teach themselves." The complexity of the reading-learning process lends itself to this student centered approach which includes deliberate and coordinated planning, strategy consideration, task implementation, and evaluation.

The reading process is an intricate communication, language and thought process in which the reader generates meaning from the page. To illustrate this complexity, Hittleman[6:117] proposed that

> ...readability is a "moment" at which time the reader's emotional, cognitive, and linguistic backgrounds interact with each other, with the topic, and with the proposed purposes for doing the reading, and with the author's choice of semantic and syntactic structures all within a particular setting.

Textbook study not only encompasses this complicated act but must also contend with the added burden of retention. Therefore, a system to internalize and transmit information found in a textbook chapter must reflect the variables of both tasks. The task is further complicated by the need to coordinate the textbook information with lecture material and to utilize it effectively during written evaluation procedures.

Textbook mastery

The problem. An analysis of Hittleman's[6] definition of readability explains why SQ3R (Robinson[11]) and similar systems are unable to create that "moment" of readability for all readers. Perhaps a major weakness in the

aforementioned constructs is inattention to the uniqueness of each text and reader and to all the factors involved in successful reading. Specifically:

1. The best known systems do not consider the emotional factors at all. Yet, it is possible for such factors to render a text unreadable. Readers who ignore this possibility are likely to unjustly develop negative attitudes about their intellect or the act of reading.
2. A reader's ability to understand is greatly influenced by his prior knowledge of the topic, his ability to think and his cognitive effort. None of these are constants from reader to reader or within a reader. Consequently, it seems almost impossible that the same sequential steps would produce identical results for all readers.
3. If we were to assume that one procedure would work for every reader, we would have to assume that every reader has the same linguistic background and that all textbooks are structured semantically and syntactically the same.
4. For the same strategies to be universal, we would also have to assume that all elements of reading and learning interact in the same way from reader to reader and across time.
5. The major flaw with the traditional systems is that they are not conducive to depths of understanding necessary for individual purposes. That is, they often leave the reader on the recognition or recall levels of understanding. The steps and activities necessary to insure recognition of facts and concepts on a multiple-choice test are not the same as those necessary to assimilate information in order to apply it in independent problem solving.[1]

In Hittleman's view the interaction of the components involved in reading is unique to the individual and the moment. In other words, what the individual brings to the reading act emotionally, cognitively and linguistically determines the operation, the sequence and the amount of redundancy necessary to accomplish the individual's purpose.

What is needed. The student who finds that no established system is adequate for his purpose needs, first, to view textbook mastery as an individual problem solving task in which he must become actively involved. Second, he needs to acquire a basic understanding of the reading and learning processes so that he can analyze the effectiveness of his usual approach to study reading. Third, since his responses to reading and learning are not constants, he needs to be guided in the development of alternative solutions to problems he may encounter. Fourth, he needs to consolidate and synthesize the metacognitive precepts formulated for ready reference.

Classroom technique. The problem the instructor encounters is that often individual students are not knowledgeable enough about the possibilities to generate effective solutions on their own. In addition, they are often resistant to change which they perceive as being externally imposed. Thus, to lead students to the four desired outcomes mentioned, the teacher

must (1) educate the students about the reading process as it relates to the fluent reader, (2) inform them about learning theory, (3) acquaint them with a number of published textbook mastery systems, (4) encourage them to generate and record possible solutions to study reading problems, (5) provide opportunity for them to demonstrate synthesis of the first four steps by showing how the class product applies to selected texts. The philosophy behind this activity on the college level is that not only is reading an individual proposition, but that the production of active autonomous learners should be one of the goals of a college reading program.[2] Certainly, the technique could be adapted to reading courses at other levels.

The students who produced the reference tool that appears in skeleton form at the end of this article had investigated the psycholinguistic view of the reading process.[13,14,4,3] They also explored theories of learning provided by Pauk[10] and Bandt, Meara and Schmidt[1]. In addition, they had used and critiqued at least one of the following textbook mastery systems: SQ3R[11], OK5R[10], PQ3R[7], ORAWET[8]. Armed with this, they were then asked to produce possible procedures which could be used as a reference when seeking solutions to individual textbook mastery problems. To begin, the stages of learning, adapted from *A Time To Learn*[1] were agreed upon by the class. Then the system was produced in the following manner:

1. A stage at a time, individual students were asked to generate steps and possible activities appropriate to the stage.
2. Students then shared and explained their ideas in small groups. The groups then submitted a group product.
3. The small group products were combined (eliminating duplication) to produce a class product.
4. Each stage of the class product was presented to the whole group for critique.
5. After each stage had been critiqued and changes made, a final product was presented to the class and they were asked to defend their system according to Pauk's eight principles of learning.

Though this activity provided the students with a concrete product to take from the class, the most valuable learning evolved from the process of interacting with experts in the field and with each other. An added advantage of this approach was that the students were much more committed to a system which they had developed and defended and which they felt was sensitive to their individual needs.

Culminating activity. The final activity called for each student to plan a demonstration that showed how the class product could be employed to best advantage with a specific chapter of a college textbook. Most students selected the text with which they were experiencing the most difficulty. The assignment required a structured presentation accompanied by a detailed outline of that presentation. The demonstrations were given to small groups of those students who helped create the class product. Their knowledge of the

system permitted spirited interaction and demanded close attention to detail on the part of the demonstrator.

Test taking techniques

The problem. The foregoing textbook techniques are intended to provide an opportunity for each student to develop flexible, personalized procedures that will lead him to Hittleman's[6] "moment" of readability. But the difficulty is not yet resolved. Compounding the problem is the necessity of combining the textbook information with lecture material, committing it to memory, and reproducing it adequately during written tests.

The student has a complex task before him. First, he must become knowledgeable about the various forms of tests regularly given at the college level. Second, he must learn to anticipate the material likely to be found on each type of test. Third, he must have practice in transmitting the anticipated material to the test paper in an anxiety-free situation. Finally, he must be provided with an opportunity to evaluate his own knowledge and ability.

Classroom techniques. To achieve the first goal, students must be instructed on how to accurately construct classroom tests as exemplified by Gronlund[5] and how to effectively take written tests as expounded by Millman and Pauk[9]. The second, third and fourth goals are met in creation/production/interaction activities that are structured in the following ways:

1. Students are divided into two groups and assigned material from a selected text. Then, brief, concise lectures covering the material are delivered by the instructor. Material from an academic area may be chosen. Individuals in group #1 are instructed to read and select the most pertinent information from their assigned material, to combine it with the lecture material, and to prepare essay tests as outlined by Gronlund[5]. Individuals in group #2 are given the same instructions but must focus on different material. In addition, students in group #1 prepare themselves to take the tests prepared by students in group #2 and vice-versa.
2. At a specified time, students exchange tests and complete them, using the skills described by Millman and Pauk[9], but without the intense pressure of a "real" test.
3. Upon completion of the test-taking activity, each student corrects the test he created that was filled out by his asssigned partner. He must evaluate it not only for accuracy, but for quality of production. The final segment of the activity provides an opportunity for each pair of students to interact, clarifying specific points, pointing out strengths and weaknesses and making suggestions for improvements, not only in the test taking performance but also in the selection of material for, and production of, the test itself. The total activity is repeated for each type of test (multiple choice, alternate answer, open book) that might be encountered in the academic environment.

Conclusion

Once again the learner has personalized classic academic procedures and has expanded his performance to that of teacher, rather than limiting it to that of learner. No longer is the complex scenario of acquiring, organizing, retaining and reproducing specific material a mystery to him. He is now privy to the theories, techniques, products and activities involved in the textbook/lecture/test-taking cycle of the academic world.

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TEXTBOOK STUDY REFERENCE TOOL
READING 103B

The reading process is a complex communication, language and thought process. Therefore, a system to internalize and transmit information found in a textbook chapter must reflect this complexity. The user of this reference tool must keep in mind that the steps and activities are not discrete operations, may seem redundant, and are not necessarily presented ordinally. The user must select those activities from the possibilities which will most efficiently aid him in accomplishing his purpose. If the user does not accomplish his purpose, he may need to reevaluate his purpose, his choice of activities or the quality of his performance.

Framework around which students built their Textbook Reference Tool.

STAGES OF LEARNING	STEPS	POSSIBLE ACTIVITIES
Preparation		
Reception		
Consolidation/ Organization		
Internalization		
Transmission		

A SENTENCE STRUCTURING GRAPH

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With the recent growth in popularity of sentence combining, several teachers have logically connected this process with the Christensen generative rhetoric of the sentence.[3,5,6] In the discussion of T-units, clauses per T-unit, and words per clause, the main emphasis in sentence-combining has been on the number of words per clause or the number of words per T-unit as a measure of "syntactic maturity."[2] However, little attention has been paid to the relationship between sentence combining, the Christensen generative rhetoric of the sentence, and sentence variety. The latter is a stylistic point in almost every composition textbook, but it often receives little attention, especially in the teaching of composition. This neglect stems, I believe, from the difficulty of immediately *seeing* the effect of sentence variety on a prose passage. Strong notes the importance of seeing when he suggests that students do sentence combining exercises both orally and visually.[6] However, I think a simplified visual display of sentences, roughly based on Christensen's method, better shows the effects of sentence combining and sentence variety. Furthermore, presenting sentence structures in the form of a graph improves the attitude of some technical students, who seem more accustomed to interpreting computer printouts and sine functions than to reading sentences.

To achieve a visual display of sentence variety, teachers only modify the principles of Christen's generative rhetoric of the sentence and apply them to a basic line graph. Christensen bases his generative rhetoric on four basic principles (Addition, Movement, Levels of Generality, and Texture):

1. Writing is essentially a process of addition.
2. The direction of modification or movement is generally toward a "noun head" or "verb head."
3. A sentence is developed by adding more concrete modifiers to a general main clause or kernel. In other words, the process of addition adds more specific information.

4. The texture of a prose selection indicates the frequency of modifiers. Prose with few modifiers is poor or thin in texture; prose with many modifiers is rich or thick in texture.[1]

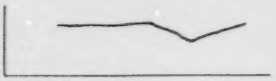
Following these principles, one can strive for what seems to be Christensen's goal — the creation of greater texture in writing, something which a sentence graph clearly and immediately displays.

The basic principles of the Sentence Structure Graph (SSG) are as follows:

1. The horizontal axis is the linear length of the sentence. If necessary, this axis can be marked to indicate individual units or words.
2. The vertical axis indicates the level of generality. Because the process of addition involves adding more concrete information to a general kernel sentence, the scale on the vertical axis will range from the most general (farthest from the horizontal axis) to the most concrete (nearest to the horizontal axis).

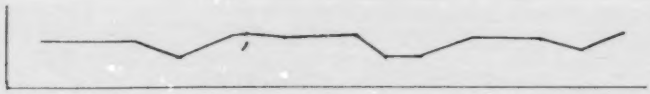
Such a sentence graph immediately illustrates the effects of parallelism as well as the differences between loose and periodic sentences. Furthermore, it provides direct visual evidence of the effectiveness of sentence combining.

The basic principles of the Sentence Structure Graph can be illustrated by graphing the seven types of sentences which, Linda Kunz says, constitute about ninety-five percent of all the sentences students write. For examples, I am using the sentences presented by Kunz in *Teaching Basic Skills in College*.[4] The basic "Trunk" sentence, "Henry VIII had six wives," is graphed as follows:



Henry VIII had six wives.

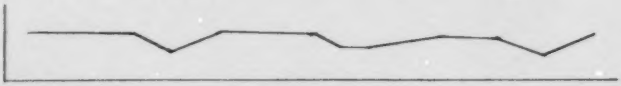
This is fairly flat because the only modifier is "six" and the levels of generality within the sentence hardly vary. But this very simple form of a sentence certainly will be modified and complicated by the addition of other elements. For example, a compound sentence can simply be described as having two "Trunks" and may be graphed as follows:



Henry VIII had six wives, but he had a hard time getting an heir.

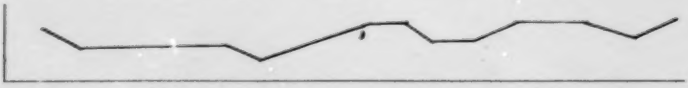
For the purposes of distinction in graphing, punctuation marks are indicated by breaks in the graph line (discussed in more detail later). Because the

emphasis of the Sentence Structure Graph is on showing the effect of a richer texture or increased modification, little difference is indicated between a compound sentence and the third basic sentence pattern, a sentence with one main subject and two verbs:



Henry VIII had six wives but had a hard time getting an heir.

The Sentence Structure Graph more clearly illustrates the effect of a modifying clause or phrase in a sentence, and the position of the modifying element can perceptibly change the graph of the sentence. For example, a modifying clause at the beginning of the sentence, what Kunz calls a "Front Shifter and Trunk," produces the following sentence and graph:

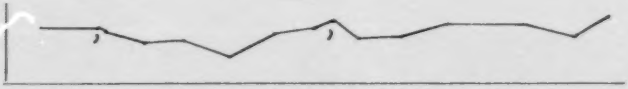


Though Henry VIII had six wives, he had a hard time getting an heir.

Because the first clause modifies the second, the first clause is more specific and has a lower level of generality and must be graphed lower on the SSG. Because "though," like a relative pronoun, signals a relationship between two parts of the sentence, it is represented as a slanted line on the SSG. The order of the Trunk and Shifter could be reversed to produce the "Trunk and End Shifter" pattern, which eliminates the need for the punctuation in the fifth sentence pattern:

Henry VIII had a hard time getting an heir though he had six wives.

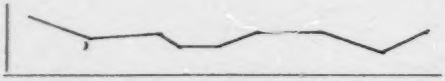
Of course, a student may insert the modifying phrase or clause within the trunk of the sentence:



Henry VIII, who had six wives, had a hard time getting an heir.

With such an insert, breaks in the line of the graph, which correspond to the use of punctuation marks, distinguish between restrictive and non-restrictive modifiers.

The seventh and final basic sentence pattern involves the "Trunk" and a link to another sentence. In such cases, the use of the link itself suggests a formative grammatical relationship between the graphed sentence and another sentence. Therefore, the link suggests, in terms of the levels of generality it connects, the relationship between the two sentences. Consider the following example:

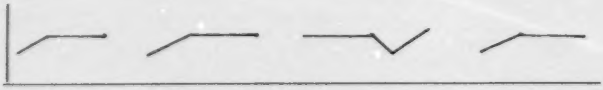


However, he had a hard time getting an heir.

To have the Sentence Structuring Graph function consistently and to avoid a plethora of situational rules, the principles for graphing a sentence on the SSG have been limited to a very few basic ones:

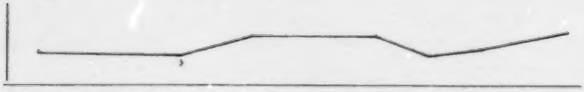
1. Because a sentence is a linear creation, the graph of the sentence must move from the left to the right, and no two words may occupy the same vertical space.
2. The main elements of the main clause (subject, object, indirect object, verb and verbals, such as phrasal verbs and infinitives) should all be on the same level. Any modifier (adjective, adverb, preposition phrase, relative clause, and the like) is graphed one level below what it modifies.
3. Punctuation marks are represented by placing the punctuation mark slightly below the line of the graph. (Students found it valuable to include the punctuation marks because they could more easily correlate the graph of the sentence with the written words.)

With these principles in place, the instructor or tutor can show, by means of the SSG, how effectively sentence combining can improve the "texture" and style of a student's writing. The Sentence Structuring Graph can show how a series of short, choppy sentences with little texture or modification can be transformed into a longer, richer sentence. Consider the following sentences from Strong's sample essay, "Rock Concert."[6:62]



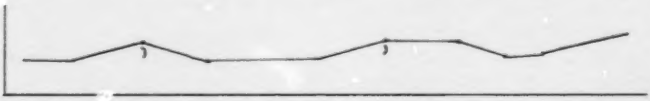
The singer was young. The singer was swarthy. He stepped into the spotlight. The spotlight was red.

Even if "stepped into" were considered as a separate verb and preposition, these sentences lack variety. However, combined, these four simple sentences become one much more interesting sentence, especially in terms of its graph.



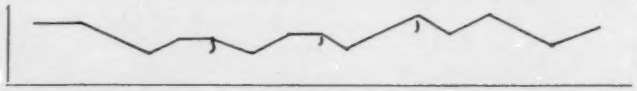
The swarthy, young singer stepped into the red spotlight.

Of course, such a sentence can be written several ways and graphed in several ways.



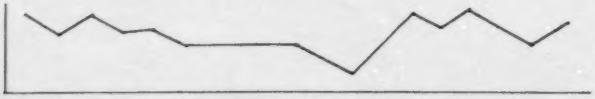
The young singer, who was swarthy, stepped into the red spotlight.

The Sentence Structuring Graph can be used for two purposes which complement sentence combining: the reduction of wordiness and the construction of parallel elements. The SSG quickly and effectively shows how sentence combining will reduce the number of unnecessary words in a student's writing, for the horizontal length of the sentence graph shrinks as the student deletes excess verbiage. Ideally, parallel elements should be constructed with nouns balancing nouns, adjectives matching adjectives, prepositional phrases equalling prepositional phrases, and so forth. While the SSG cannot guarantee the construction of parallel elements, it can reveal if the relationships between the modifiers and the "heads" are actually (and visually) parallel. Consider, for example, the parallel phrases in the last part of this famous sentence, which, in itself, is from a series of larger parallel elements:



that government of the people, by the people, for the people, shall not perish from the earth.

(Incidentally, this graphing of the last part of Lincoln's address reveals one basic problem with the SSG, that is, the difficulty of graphing long sentences in a limited space.) Assuming Lincoln were completely befuddled by English grammar and had turned out the following sentence with faulty parallelism, the graph of the sentence would reveal the awkwardness of the construction.



that people's government which is by them and for all of the people shall not perish from the earth.

Although it has not been discussed, the capacity of the SSG to illustrate the differences between sentence types (loose vs. periodic or compound vs. complex) also clearly exists. In fact, the purpose of the SSG is diagnostic and illustrative rather than prescriptive; that is, no ideal graph or pattern of graphs exists, but by graphing a sentence a student can quickly see some of his writing problems presented in another form. The SSG effectively and dramatically reveals writing problems of sentence length and variety, wordiness, parallelism, and primarily, lack of texture or modification. But the SSG may be most helpful as a means of diagnosing writing which is too general, too vague, too abstract, that is, writing which is not developed, specific, and concrete enough to be authoritative and hold a reader's interest. If a student writer can *see* that his or her sentences remain consistently at one level, then the student should also be able to see that the writing needs to be developed further with more specific details. Thus, used as an instructional aid, the SSG can help students develop their compositions, as well as improve the style in the papers.

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TEACHING STUDY SKILLS TO THE WHOLE PERSON

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California State University, Los Angeles

The problem

Several years ago when we began a study skills program, our approach was quite typical. The usual topics of note-taking, test-taking, time management, and textbook reading were all presented in a lecture-practice format. Despite energetic teaching and good materials, we realized that the students were not applying the techniques to their own studying. Granted, the more motivated students readily adopted the methods introduced in class, but the majority resisted making any changes in their own study behaviors even though they understood the principles.

A change in approach

We began to reexamine our teaching approach, our teaching materials and especially our student population. California State University, Los Angeles, the most ethnically diverse university in the state, draws students from a multitude of ethnic and socio-economic backgrounds. In many respects, the average CSULA student differs significantly from the typical college student at whom most study skills courses are aimed. For example, most of our students still live at home and work part-time. Many are the first member of their family to attend college. Because they come from inner-city schools, they often lack the confidence and skills necessary to function effectively in a large, impersonal urban university. We discovered that we needed to adapt our approach and curriculum to match more closely the characteristics of the students. Since our greatest frustration as instructors was in the students' apparent resistance to behavioral change, we decided that our approach must emphasize the behavior-changing process. By viewing the students as complex, multi-faceted people with feelings as well as deficiencies in study skills, we took a first step in helping make affective, as well as cognitive, changes to become better students.

The first curricular change involved the addition of a personal development component which was taught by a counselor. The premise for the inclusion was simple: personal issues can inhibit the improvement of study habits; therefore, helping students deal with these issues should facilitate improved study habits.

One-half of each workshop meeting was then devoted to the exploration of personal issues. Using an adaptation of *Success Core*[1] such topics as success and failure, fear, excuses, roadblocks, advice, negativity, self-confidence, and goal setting were discussed. Initially, the counselor led the personal development sessions, but after two quarters of observation and training, the regular study skills staff felt comfortable in conducting the sessions. (Any students with more serious personal problems were referred to a professional counselor for individual help.)

The second change was in the area of study skills. Although the topics we presented remained the same (textbook reading, listening and note-taking, time management, and test-taking), we began to employ a five-step problem-solving approach (awareness, identification, selection, implementation, follow-up/reevaluation) to maximize individualization and student involvement. Using this approach, the students were asked to look objectively at their attitudes and habits (awareness) in order to identify both successful and unsuccessful practices (identification). Successful methods were shared and reinforced. Then the students were encouraged to select more appropriate methods (selection) and to implement them (implementation). As the students began to employ these new techniques, they reported to the group on their progress. The group served to encourage, validate, motivate, or, in the case of unsuccessful techniques, suggest alternatives (follow-up/reevaluation). The role of the instructor was threefold: (1) to provide activities which facilitated the process of self-examination, (2) to enhance group interaction, and (3) to provide information about more appropriate study techniques when the groups' collective knowledge was insufficient. The way in which this problem-solving approach works is best illustrated by an examination of an abbreviated lesson plan on solving concentration problems.

Lesson plan for solving concentration problems

Purpose. The students will become aware of their concentration problems and seek solutions to those problems.

Assumption: If the students have mastered basic reading skills but still have "reading problems," one probable cause may be difficulty in concentrating. Therefore, this session is devoted to concentration problems.

Procedure

Awareness stage

1. Ask the students to share situations when they experience concentration problems.

2. Have the students formulate a definition of "concentration" (the ability to focus all attention on the task at hand), and then brainstorm on situations when concentration is especially easy or difficult. Discuss the factors involved.
3. Have the students list two positive and two negative qualities about their reading habits, skills, or attitudes. List the responses on the board.

Identification stage

1. Ask the students to select two reading problems they would like to eliminate or minimize. Direct the students to write these two problems on the "Problem Areas in Reading a Textbook" worksheet (see Appendix 1).

Selection stage

1. Pass out the "Overcoming Concentration Problems" handout (see Appendix 2). Using this and the "Reading Habits Self-Rating" (see Appendix 3) completed during the previous class session, have the students select one realistic, workable, reasonable solution to each stated problem and write it on the "Problem Areas in Reading a Textbook" worksheet.
2. After the students have completed the above activity, ask them to share their problems and solutions. To assist those who were not able to locate an appropriate solution on their own, solicit solutions from the rest of the group. Make sure each student leaves with a commitment to implement the solution to his/her problem.
3. Discuss the purpose of and the need for rewards. Have each person choose a suitable reward and record it on the "Problem Areas in Reading a Textbook" worksheet.

Implementation stage

1. In order to document the process of behavior change, give the students a "Problem-Solving Diary" (see Appendix 4) to record both actions taken and outcomes. Instruct the students to bring the "Problem-Solving Diary" to the next session to be used as a basis for discussion.
2. On the back of the diary, direct the students to first write their names with their non-preferred hands. Elicit comments about how they felt doing it ("stupid," "awkward"). Then have them write their names with their preferred hands. Discuss why the attempt with the preferred hand was much easier (the key is practice). The purpose of this activity is to have the students experience the initial discomfort involved in changing well-established habits.

Follow-up/reevaluation

1. The most crucial stage is follow-up. At least once a week, discuss individual progress since the group can serve as a powerful motivator in keeping individuals committed to changing their habits.

Outcomes

At the end of the quarter, the students were asked to complete two evaluations. One form focused on behavioral changes, the other on attitudinal changes toward reading and studying. The results in both cases were encouraging.

It was clear that the students had made deliberate changes in their approaches to studying. All reported making at least one intentional change in their approaches to textbook reading; most had made changes in their approaches to test-taking and note-taking. Many observed that the workshop helped them organize their study time more effectively. Since the difficulty in teaching study skills lies in getting students to actually apply new techniques, it was gratifying to find that the students had begun to make changes in their study behavior.

Not only were the students implementing new techniques and strategies, but they reported more positive attitudes about studying; they were more highly motivated because of their increased belief in the value of studying. As a result of the personal development component, many expressed increased confidence in asking questions in class or talking to their professors. The opportunity to examine strengths and weaknesses combined with the group's supportiveness fostered self-awareness, self-confidence, and a greater degree of responsibility for their own lives.

APPENDIX 1

Activity Sheet: Problem Areas in Reading a Textbook
Sample

Problem #1:

Solution:

Reward:

APPENDIX 2

Activity Sheet: Overcoming Concentration Problems
Sample

"I'm bored with the subject."

1. Accept that the goal of a decent grade is worth the studying you'll have to do and force yourself to get involved in the subject.
2. Skim the chapter first to find the key ideas.
3. Ask "who," "what," "where," "when," "why," and "how" questions before reading.
4. Study with someone.

APPENDIX 3

Activity Sheet: Reading Habits Self-Rating
Sample

Directions: Rate yourself honestly on your reading habits. There are no right or wrong answers to this exercise.

1 = always or most of the time 2 = sometimes 3 = never or hardly ever

___ 1. Do you study in the same place at the same time each day?

___ 2. Do you get rid of all the "garbage" (things that are bothering you) before you sit down to study?

___ 3. Do you tell yourself to remember before you begin to read?

___ 4. Do you make notes in the margins of your book?

___ 5. Do you say the main points of each section out loud?

___ 6. After reading, do you write a summary in your own words?

___ 7. Do you stand up and close your book each time you find yourself daydreaming?

___ 8. Do you overlearn the material?

APPENDIX 4

Activity Sheet: Problem-Solving Diary
Sample

Date	Action Taken	Result

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